SEQUENCE LISTING

<110> O'Brien, Timothy J.
Beard, John B.
Underwood, Lowell J.

<120> Repeat Sequences of the CA125 Gene and Their Use for Diagnostic and Therapeutic Interventions

<130> 022438.43865

<140> US 09/965,738
<141> 2001-09-27

<150> US 60/284,175
<151> 2001-04-17

<150> US 60/299,380
<151> 2001-06-19

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<170> PatentIn version 3.2

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ggt ctg ctc agg cct gtg ttc aag aac acc agt gtt ggc cct ctg tac        96
Gly Leu Leu Arg Pro Val Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr
            20                  25                  30

tct ggc tgc aga ctg acc ttg ctc agg ccc aag aag gat ggg gca gcc       144
Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala Ala
        35                  40                  45

acc aaa gtg gat gcc atc tgc acc tac cgc cct gat ccc aaa agc cct       192
Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro Asp Pro Lys Ser Pro
    50                  55                  60

gga ctg gac aga gag cag cta tac tgg gag ctg agc cag ggt gat gca       240
Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Gly Asp Ala
65                  70                  75                  80


<210>  6
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<212>  PRT
<213>  Homo sapiens

<400>  6

Arg Arg Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln
1               5                   10                  15


Gly Leu Leu Arg Pro Val Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr
            20                  25                  30


Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala Ala
        35                  40                  45


Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro Asp Pro Lys Ser Pro
    50                  55                  60


Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Gly Asp Ala
65                  70                  75                  80
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<400> 8

Glu Arg Val Leu Gln Gly
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Pro Leu Leu Ile Pro Phe
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<210> 11
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<213> Homo sapiens

<400> 11

Glu Arg Val Leu Gln Gly Leu Leu Arg Ser Leu Phe Lys Ser Thr Ser
1 5 10 15

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Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
            20                  25                  30

Lys Asp Gly Thr Ala Thr Gly Val Asp Ala Ile Cys Thr His His Pro
        35                  40                  45

Asp Pro Lys Ser Pro Arg Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ala Leu Asp
65                  70                  75                  80

Asn Asp Ser Leu Phe Val Asn Gly Phe Thr His Arg Ser Ser Val Ser
                85                  90                  95

Thr Thr Ser Thr Pro Gly Thr Pro Thr Val Tyr Leu Gly Ala Ser Lys
            100                 105                 110

Thr Pro Ala Ser Ile Phe Gly Pro Ser Ala Ala Ser Pro Leu Leu Ile
        115                 120                 125

Pro Phe Thr
    130
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<210> 12
<211> 130
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<213> Homo sapiens

<400> 12

```
Glu Arg Val Leu Gln Gly Leu Leu Met Pro Leu Phe Lys Asn Thr Ser
1               5                   10                  15

Val Ser Ser Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
            20                  25                  30

Lys Asp Gly Ala Ala Thr Arg Ala Asp Ala Val Cys Thr His Arg Pro
        35                  40                  45

Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Lys Leu
    50                  55                  60

Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp
65                  70                  75                  80

Arg His Ser Leu Tyr Val Asn Gly Phe Thr His Gln Ser Ser Met Thr
                85                  90                  95
```

```
Thr Thr Arg Thr Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg
            100                 105                 110

Thr Pro Ala Ser Leu Ser Gly Pro Thr Thr Ala Ser Pro Leu Leu Ile
        115                 120                 125

Pro Phe
    130
```

<210> 13
<211> 132
<212> PRT
<213> Homo sapiens

<400> 13

```
Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Ile Phe Lys Asn Thr Ser
1               5                   10                  15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Ser Glu
            20                  25                  30

Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Ile His Arg Leu
        35                  40                  45

Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Lys Leu Thr Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr Leu Asp
65                  70                  75                  80

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln Ser Ser Val Ser
                85                  90                  95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Arg Thr Ser Gly
            100                 105                 110

Thr Pro Ser Ser Leu Ser Ser Pro Thr Ile Met Ala Ala Gly Pro Leu
        115                 120                 125

Leu Ile Pro Phe
    130
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<210> 14
<211> 130
<212> PRT
<213> Homo sapiens

<400> 14

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Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe Lys Asn Thr Ser
1               5                  10                  15

Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
            20                  25                  30

Lys Asn Gly Ala Ala Thr Gly Met Asp Ala Ile Cys Ser His Arg Leu
        35                  40                  45

Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Gln Leu Thr His Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp
65                  70                  75                  80

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Ala
                85                  90                  95

Pro Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly
            100                 105                 110

Thr Pro Ser Ser Leu Pro Ser Pro Thr Thr Ala Val Pro Leu Leu Ile
        115                 120                 125

Pro Phe
    130

<210>  15
<211>  130
<212>  PRT
<213>  Homo sapiens

<400>  15

Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Leu Phe Lys Asn Ser Ser
1               5                  10                  15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Ile Ser Leu Arg Ser Glu
            20                  25                  30

Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His His Leu
        35                  40                  45

Asn Pro Gln Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Gln Leu
    50                  55                  60

Ser Gln Met Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp
65                  70                  75                  80
```

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Gly Leu
85 90 95

Thr Thr Ser Thr Pro Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly
100 105 110

Thr Pro Ser Pro Val Pro Ser Pro Thr Thr Ala Gly Pro Phe Leu Ile
115 120 125

Pro Phe
130

<210> 16
<211> 130
<212> PRT
<213> Homo sapiens

<400> 16

Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Leu Phe Lys Ser Thr Ser
1 5 10 15

Ala Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
20 25 30

Lys His Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr Leu Arg Leu
35 40 45

Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu
50 55 60

Ser Gln Leu Thr Asn Ser Val Thr Glu Leu Gly Pro Tyr Thr Leu Asp
65 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro
85 90 95

Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly
100 105 110

Thr Pro Ala Ser Leu Pro Gly His Thr Ala Pro Gly Pro Leu Leu Ile
115 120 125

Pro Phe
130

<210> 17
<211> 130
<212> PRT
<213> Homo sapiens

<400> 17

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Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser
1               5                  10                  15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
            20                  25                  30

Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu
        35                  40                  45

Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Thr Leu Asp
65                  70                  75                  80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro
                85                  90                  95

Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly
            100                 105                 110

Thr Pro Ala Ser Leu Pro Gly His Ile Val Pro Gly Pro Leu Leu Ile
        115                 120                 125

Pro Phe
    130
```

<210> 18
<211> 131
<212> PRT
<213> Homo sapiens

<400> 18

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Glu Arg Val Leu Gln Gly Leu Leu Thr Pro Leu Phe Lys Asn Thr Ser
1               5                  10                  15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
            20                  25                  30

Lys Gln Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Val
        35                  40                  45

Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp
```

65 70 75 80

Arg Asp Ser Leu Tyr Val Asp Gly Phe Asn Pro Trp Ser Ser Val Pro
85 90 95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser Gly
100 105 110

Thr Pro Ser Pro Leu Pro Gly His Thr Ala Pro Val Pro Leu Leu Ile
115 120 125

Pro Phe Thr
130

<210> 19
<211> 131
<212> PRT
<213> Homo sapiens

<400> 19

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr Ser
1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
20 25 30

Lys His Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu
35 40 45

Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu
50 55 60

Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp
65 70 75 80

Arg Gly Ser Leu Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro
85 90 95

Ile Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu
100 105 110

Thr Pro Ser Ser Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Val
115 120 125

Pro Phe Thr
130

<210> 20

<211> 130
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<213> Homo sapiens

<400> 20

Glu Arg Val Leu Gln Gly Leu Leu Ser Pro Ile Phe Lys Asn Ser Ser
1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu
20 25 30

Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro
35 40 45

Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu
50 55 60

Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp
65 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro
85 90 95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly
100 105 110

Thr Pro Ser Ser Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile
115 120 125

Pro Phe
130

<210> 21
<211> 131
<212> PRT
<213> Homo sapiens

<400> 21

Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Leu Phe Lys Asn Thr Ser
1 5 10 15

Ile Gly Pro Leu Tyr Ser Ser Cys Arg Leu Thr Leu Leu Arg Pro Glu
20 25 30

Lys Asp Lys Ala Ala Thr Arg Val Asp Ala Ile Cys Thr His His Pro
35 40 45

Asp Pro Gln Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu
50 55 60

```
Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp
65                  70                  75                  80

Arg Asp Ser Leu Tyr Val Asp Gly Phe Thr His Trp Ser Pro Ile Pro
                85                  90                  95

Thr Thr Ser Thr Pro Gly Thr Ser Ile Val Asn Leu Gly Thr Ser Gly
            100                 105                 110

Ile Pro Pro Ser Leu Pro Glu Thr Thr Ala Thr Gly Pro Leu Leu Ile
        115                 120                 125

Pro Phe Thr
    130
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<210> 22
<211> 282
<212> PRT
<213> Homo sapiens

<400> 22

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Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser
1               5                   10                  15

Leu Glu Tyr Leu Tyr Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu
            20                  25                  30

Lys Asp Ser Ser Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro
        35                  40                  45

Asp Pro Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp
65                  70                  75                  80

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Met Pro
                85                  90                  95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Val Gly Thr Ser Gly
            100                 105                 110

Thr Pro Ser Ser Ser Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Met
        115                 120                 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp
    130                 135                 140
```

```
Met Arg Arg Thr Gly Ser Arg Lys Phe Asn Thr Met Glu Arg Val Leu
145                 150                 155                 160

Gln Gly Leu Leu Ser Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu
                165                 170                 175

Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala
            180                 185                 190

Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg
        195                 200                 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr
    210                 215                 220

His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu
225                 230                 235                 240

Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro Thr Thr Ser Thr
                245                 250                 255

Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser
            260                 265                 270

Phe Pro Gly His Thr Glu Pro Gly Pro Leu
        275                 280


<210>  23
<211>  286
<212>  PRT
<213>  Homo sapiens

<400>  23

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser
1               5                   10                  15

Leu Glu Tyr Leu Tyr Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu
            20                  25                  30

Lys Asp Ser Ser Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro
        35                  40                  45

Asp Pro Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp
65                  70                  75                  80
```

```
Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Gly Leu
                85                  90                  95

Thr Thr Ser Thr Pro Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly
            100                 105                 110

Thr Pro Ser Pro Val Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Ile
        115                 120                 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn
    130                 135                 140

Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu
145                 150                 155                 160

Gln Gly Leu Leu Met Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu
                165                 170                 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala
            180                 185                 190

Ala Thr Arg Val Asp Ala Val Cys Thr Gln Arg Pro Asp Pro Lys Ser
        195                 200                 205

Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Lys Leu Ser Gln Leu Thr
    210                 215                 220

His Gly Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg His Ser Leu
225                 230                 235                 240

Tyr Val Asn Gly Leu Thr His Gln Ser Ser Met Thr Thr Thr Arg Thr
                245                 250                 255

Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg Thr Pro Ala Ser
            260                 265                 270

Leu Ser Gly Pro Thr Thr Ala Ser Pro Leu Leu Ile Pro Phe
        275                 280                 285


<210>  24
<211>  250
<212>  PRT
<213>  Homo sapiens

<400>  24

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser
1               5                   10                  15
```

```
Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
            20                  25                  30

Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu
        35                  40                  45

Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp
65                  70                  75                  80

Arg Gly Ser Leu Tyr Val Asn Gly Phe Thr His Arg Thr Ser Val Pro
                85                  90                  95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly
            100                 105                 110

Thr Pro Phe Ser Leu Pro Ser Pro Ala Thr Ala Gly Pro Leu Leu Val
        115                 120                 125

Leu Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Lys Tyr Glu Glu Asp
    130                 135                 140

Met His Arg Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu
145                 150                 155                 160

Gln Thr Leu Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly Leu Leu
                165                 170                 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Ser Glu Lys Asp Gly Ala
            180                 185                 190

Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser
        195                 200                 205

Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr
    210                 215                 220

Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu
225                 230                 235                 240

Tyr Val Asn Gly Phe Thr His Trp Ile Pro
                245                 250
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<210> 25

<211> 286
<212> PRT
<213> Homo sapiens

<400> 25

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Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser
1               5                  10                  15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
            20                  25                  30

Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu
        35                  40                  45

Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp
65                  70                  75                  80

Arg Gly Ser Leu Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro
                85                  90                  95

Ile Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu
            100                 105                 110

Thr Pro Ser Ser Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Ile
        115                 120                 125

Pro Phe Thr Ile Asn Phe Thr Ile Thr Asn Leu Arg Tyr Glu Glu Asn
    130                 135                 140

Met His His Pro Gly Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu
145                 150                 155                 160

Gln Gly Leu Leu Gly Pro Leu Phe Lys Asn Ser Ser Val Gly Pro Leu
                165                 170                 175

Tyr Ser Gly Cys Arg Leu Ile Ser Leu Arg Ser Glu Lys Asp Gly Ala
            180                 185                 190

Ala Thr Gly Val Asp Ala Ile Cys Thr His His Leu Asn Pro Gln Ser
        195                 200                 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Gln Leu Ser Gln Met Thr
    210                 215                 220

Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu
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225 230 235 240

Tyr Val Asn Gly Phe Thr His Arg Ser Ser Gly Leu Thr Thr Ser Thr
245 250 255

Pro Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Pro
260 265 270

Val Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Ile Pro Phe
275 280 285

<210> 26
<211> 286
<212> PRT
<213> Homo sapiens

<400> 26

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser
1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
20 25 30

Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu
35 40 45

Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu
50 55 60

Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp
65 70 75 80

Arg Gly Ser Leu Tyr Val Asn Gly Phe Ser Arg Gln Ser Ser Met Thr
85 90 95

Thr Thr Arg Thr Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg
100 105 110

Thr Pro Ala Ser Leu Ser Gly Pro Thr Thr Ala Ser Pro Leu Leu Ile
115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn
130 135 140

Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu
145 150 155 160

Gln Gly Leu Leu Asn Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu

165 170 175

Tyr Ser Gly Cys Arg Leu Thr Ser Leu Lys Pro Glu Lys Asp Gly Ala
180 185 190

Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg
195 200 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr
210 215 220

His Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu
225 230 235 240

Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Ala Pro Thr Ser Thr
245 250 255

Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Ser
260 265 270

Leu Pro Ser Pro Thr Thr Ala Val Pro Leu Leu Ile Pro Phe
275 280 285

<210> 27
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<212> PRT
<213> Homo sapiens

<400> 27

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser
1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
20 25 30

Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu
35 40 45

Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu
50 55 60

Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp
65 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro
85 90 95

Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu Glu Thr Phe Gly

100 105 110

Thr Pro Ala Ser Leu His Gly His Thr Ala Pro Gly Pro Val Leu Val
115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp
130 135 140

Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu
145 150 155 160

Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu
165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Arg Gly Ala
180 185 190

Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu Asp Pro Leu Asn
195 200 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr
210 215 220

Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp Arg Gly Ser Leu
225 230 235 240

Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro Ile Thr Ser Thr
245 250 255

Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu Thr Pro Ser Ser
260 265 270

Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Ile Pro Phe
275 280 285

<210> 28
<211> 286
<212> PRT
<213> Homo sapiens

<400> 28

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser
1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
20 25 30

Lys His Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr Leu Arg Leu

```
        35                  40                  45

Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Gln Leu Thr Asn Ser Val Thr Glu Leu Gly Pro Tyr Thr Leu Asp
65                  70                  75                  80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro
                85                  90                  95

Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly
            100                 105                 110

Thr Pro Ala Ser Leu Pro Gly His Thr Ala Pro Gly Pro Leu Leu Val
        115                 120                 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp
    130                 135                 140

Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu
145                 150                 155                 160

Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu
                165                 170                 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Arg Gly Ala
            180                 185                 190

Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu Asp Pro Leu Asn
        195                 200                 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr
    210                 215                 220

Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp Arg Gly Ser Leu
225                 230                 235                 240

Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro Ile Thr Ser Thr
                245                 250                 255

Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu Thr Pro Ser Ser
            260                 265                 270

Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Ile Pro Phe
        275                 280                 285
```

<210> 29
<211> 281
<212> PRT
<213> Homo sapiens

<400> 29

Glu Arg Val Leu Gln Gly Leu Leu Thr Pro Leu Phe Lys Asn Thr Ser
1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
20 25 30

Lys Gln Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Val
35 40 45

Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu
50 55 60

Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp
65 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Trp Ser Ser Val Pro
85 90 95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser Gly
100 105 110

Thr Pro Ser Ser Leu Pro Gly His Thr Ala Pro Val Pro Leu Leu Ile
115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu His Tyr Glu Glu Asn
130 135 140

Met Gln His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu
145 150 155 160

Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu
165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys His Gly Ala
180 185 190

Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser
195 200 205

Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr
210 215 220

```
Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu
225                 230                 235                 240

Tyr Val Asn Gly Phe Thr His Trp Ile Pro Val Pro Thr Ser Ser Thr
                245                 250                 255

Pro Gly Thr Ser Thr Val Asp Leu Gly Ser Gly Thr Pro Ser Ser Leu
            260                 265                 270

Pro Ser Pro Thr Thr Ala Gly Pro Leu
        275                 280


<210>  30
<211>  217
<212>  PRT
<213>  Homo sapiens

<400>  30

Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Leu Phe Lys Asn Thr Ser
1               5                   10                  15

Ile Gly Pro Leu Tyr Ser Ser Cys Arg Leu Thr Leu Leu Arg Pro Glu
            20                  25                  30

Lys Asp Lys Ala Ala Thr Arg Val Asp Ala Ile Cys Thr His His Pro
        35                  40                  45

Asp Pro Gln Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp
65                  70                  75                  80

Arg Asp Ser Leu Tyr Val Asp Gly Phe Thr His Trp Ser Pro Ile Pro
                85                  90                  95

Thr Thr Ser Thr Pro Gly Thr Ser Ile Val Asn Leu Gly Thr Ser Gly
            100                 105                 110

Ile Pro Pro Ser Leu Pro Glu Thr Thr Ala Thr Gly Pro Leu Leu Ile
        115                 120                 125

Pro Phe Thr Pro Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp
    130                 135                 140

Met Arg Arg Thr Gly Ser Arg Lys Phe Asn Thr Met Glu Arg Val Leu
145                 150                 155                 160
```

```
Gln Gly Leu Leu Ser Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu
                165                 170                 175

Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala
            180                 185                 190

Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg
        195                 200                 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr
    210                 215


<210>  31
<211>  286
<212>  PRT
<213>  Homo sapiens

<400>  31

Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Val Phe Lys Asn Thr Ser
1               5                   10                  15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys
            20                  25                  30

Lys Asp Gly Ala Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro
        35                  40                  45

Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp
65                  70                  75                  80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr Gln Arg Ser Ser Val Pro
                85                  90                  95

Thr Thr Ser Ile Pro Gly Thr Pro Thr Val Asp Leu Gly Thr Ser Gly
            100                 105                 110

Thr Pro Val Ser Lys Pro Gly Pro Ser Ala Ala Ser Pro Leu Leu Val
        115                 120                 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp
    130                 135                 140

Met His Arg Pro Gly Ser Arg Lys Phe Asn Ala Thr Glu Arg Val Leu
145                 150                 155                 160
```

```
Gln Gly Leu Leu Ser Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu
                165                 170                 175

Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala
            180                 185                 190

Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg
        195                 200                 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr
    210                 215                 220

His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu
225                 230                 235                 240

Tyr Val Asn Gly Phe Thr His Gln Ser Ser Met Thr Thr Thr Arg Thr
                245                 250                 255

Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg Thr Pro Ala Ser
            260                 265                 270

Leu Ser Gly Pro Thr Thr Ala Ser Pro Leu Leu Ile Pro Phe
        275                 280                 285


<210>  32
<211>  288
<212>  PRT
<213>  Homo sapiens

<400>  32

Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe Lys Asn Thr Ser
1               5                   10                  15

Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys
            20                  25                  30

Lys Asp Gly Ala Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro
        35                  40                  45

Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp
65                  70                  75                  80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr Gln Arg Ser Ser Val Pro
                85                  90                  95
```

Thr Thr Ser Ile Pro Gly Thr Pro Thr Val Asp Leu Gly Thr Ser Gly
100 105 110

Thr Pro Val Ser Lys Pro Gly Pro Ser Ala Ala Ser Pro Leu Leu Ile
115 120 125

Pro Phe Thr Ile Asn Phe Thr Ile Thr Asn Leu Arg Tyr Glu Glu Asn
130 135 140

Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu
145 150 155 160

Gln Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu
165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala
180 185 190

Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser
195 200 205

Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr
210 215 220

Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu
225 230 235 240

Tyr Val Asn Gly Phe Thr His Gln Ser Ser Val Ser Thr Thr Ser Thr
245 250 255

Pro Gly Thr Ser Thr Val Asp Leu Arg Thr Ser Gly Thr Pro Ser Ser
260 265 270

Leu Ser Ser Pro Thr Ile Met Ala Ala Gly Pro Leu Leu Ile Pro Phe
275 280 285

<210> 33
<211> 284
<212> PRT
<213> Homo sapiens

<400> 33

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser
1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
20 25 30

```
Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro
        35                  40                  45

Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Cys Glu Leu
    50                  55                  60

Ser Gln Leu Thr His Asp Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp
65                  70                  75                  80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro
                85                  90                  95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly
            100                 105                 110

Thr Pro Ser Ser Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile
        115                 120                 125

Pro Phe Thr Phe Asn Phe Thr Ile Thr Asn Leu His Tyr Glu Glu Asn
    130                 135                 140

Met Gln His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu
145                 150                 155                 160

Gln Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu
                165                 170                 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys His Glu Ala
            180                 185                 190

Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Val Asp Pro Ile Gly
        195                 200                 205

Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr
    210                 215                 220

Asn Ser Ile His Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu
225                 230                 235                 240

Tyr Val Asn Gly Phe Asn Pro Arg Ser Ser Val Pro Thr Thr Ser Thr
                245                 250                 255

Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Ser
            260                 265                 270

Leu Pro Gly His Thr Ala Pro Val Pro Leu Leu Ile
        275                 280
```

<210> 34
<211> 288
<212> PRT
<213> Homo sapiens

<400> 34

```
Glu Arg Val Leu Gln Gly Leu Leu Ser Pro Ile Ser Lys Asn Ser Ser
1               5                  10                  15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu
            20                  25                  30

Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro
        35                  40                  45

Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp
65                  70                  75                  80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro
                85                  90                  95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly
            100                 105                 110

Thr Pro Ser Ser Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile
        115                 120                 125

Pro Phe Thr Val Asn Phe Thr Ile Thr Asn Leu Arg Tyr Glu Glu Asn
    130                 135                 140

Met His His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu
145                 150                 155                 160

Gln Gly Leu Leu Arg Pro Val Phe Lys Asn Thr Ser Val Gly Pro Leu
                165                 170                 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala
            180                 185                 190

Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro Asp Pro Lys Ser
        195                 200                 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr
    210                 215                 220
```

Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu
225 230 235 240

Tyr Val Asn Gly Phe Thr His Gln Ser Ser Val Ser Thr Thr Ser Thr
245 250 255

Pro Gly Thr Ser Thr Val Asp Leu Arg Thr Ser Gly Thr Pro Ser Ser
260 265 270

Leu Ser Ser Pro Thr Ile Met Ala Ala Gly Pro Leu Leu Ile Pro Phe
275 280 285

<210> 35
<211> 274
<212> PRT
<213> Homo sapiens

<400> 35

Glu Arg Val Leu Gln Gly Leu Leu Ser Pro Ile Phe Lys Asn Ser Ser
1 5 10 15

Val Gly Ser Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
20 25 30

Lys Asp Gly Ala Ala Thr Arg Val Asp Ala Val Cys Thr His Arg Pro
35 40 45

Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Lys Leu
50 55 60

Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp
65 70 75 80

Arg His Ser Leu Tyr Val Asn Gly Phe Thr His Gln Ser Ser Met Thr
85 90 95

Thr Thr Arg Thr Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg
100 105 110

Thr Pro Ala Ser Leu Ser Gly Pro Thr Thr Ala Ser Pro Leu Leu Val
115 120 125

Leu Phe Thr Ile Asn Phe Thr Ile Thr Asn Gln Arg Tyr Glu Glu Asn
130 135 140

Met His His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu
145 150 155 160

```
Gln Gly Leu Leu Arg Pro Val Phe Lys Asn Thr Ser Val Gly Pro Leu
                165                 170                 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala
            180                 185                 190

Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro Asp Pro Lys Ser
        195                 200                 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr
    210                 215                 220

His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Gln Asp Arg Asp Ser Leu
225                 230                 235                 240

Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro Thr Thr Ser Ile
                245                 250                 255

Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly Thr Pro Ala Ser
            260                 265                 270

Leu Pro
```

<210> 36
<211> 386
<212> PRT
<213> Homo sapiens

<400> 36

```
Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe Lys Asn Thr Ser
1               5                   10                  15

Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
            20                  25                  30

Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu
        35                  40                  45

Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp
65                  70                  75                  80

Arg Gly Ser Leu Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro
                85                  90                  95
```

```
Ile Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu
            100                 105                 110

Thr Pro Ser Ser Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Val
        115                 120                 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Ala
    130                 135                 140

Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu
145                 150                 155                 160

Gln Gly Leu Leu Arg Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu
                165                 170                 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala
            180                 185                 190

Ala Thr Arg Val Asp Ala Ala Cys Thr Tyr Arg Pro Asp Pro Lys Ser
        195                 200                 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr
    210                 215                 220

His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Val Ser Leu
225                 230                 235                 240

Tyr Val Asn Gly Phe Asn Pro Arg Ser Ser Val Pro Thr Thr Ser Thr
                245                 250                 255

Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Ser
            260                 265                 270

Leu Pro Gly His Thr Ala Pro Val Pro Leu Leu Ile Pro Phe Thr Leu
        275                 280                 285

Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro
    290                 295                 300

Gly Ser Arg Lys Phe Asn Thr Met Glu Arg Val Leu Gln Gly Leu Leu
305                 310                 315                 320

Arg Pro Leu Phe Lys Asn Thr Ser Ile Gly Pro Leu Tyr Ser Ser Cys
                325                 330                 335

Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Lys Ala Ala Thr Arg Val
            340                 345                 350
```

```
Asp Ala Ile Cys Thr His His Pro Asp Pro Gln Ser Pro Gly Leu Asn
        355                 360                 365

Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Gly Ile Thr
    370                 375                 380

Glu Leu
385
```

<210> 37
<211> 438
<212> PRT
<213> Homo sapiens

<400> 37

```
Glu Arg Val Leu His Gly Leu Leu Thr Pro Leu Phe Lys Asn Thr Arg
1               5                  10                  15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
            20                  25                  30

Lys Gln Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Val
        35                  40                  45

Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp
65                  70                  75                  80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Trp Ser Ser Val Pro
                85                  90                  95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser Gly
            100                 105                 110

Thr Pro Ser Ser Leu Pro Gly His Thr Ala Pro Val Pro Leu Leu Ile
        115                 120                 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu His Tyr Glu Glu Asn
    130                 135                 140

Met Gln His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu
145                 150                 155                 160

Gln Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu
                165                 170                 175
```

```
Tyr Ser Gly Cys Arg Leu Thr Leu Phe Lys Pro Glu Lys His Glu Ala
            180                 185                 190

Ala Thr Gly Val Asp Ala Ile Cys Thr Leu Arg Leu Asp Pro Thr Gly
        195                 200                 205

Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr
    210                 215                 220

Asn Ser Val Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu
225                 230                 235                 240

Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro Thr Thr Ser Ile
                245                 250                 255

Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly Thr Pro Ala Ser
            260                 265                 270

Leu Pro Gly His Thr Ala Pro Gly Pro Leu Leu Ile Pro Phe Thr Leu
        275                 280                 285

Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr
    290                 295                 300

Gly Ser Arg Lys Phe Asn Thr Met Glu Arg Val Leu Gln Gly Leu Leu
305                 310                 315                 320

Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys
                325                 330                 335

Arg Leu Thr Leu Leu Arg Pro Glu Lys Arg Gly Ala Ala Thr Gly Val
            340                 345                 350

Asp Thr Ile Cys Thr His Arg Leu Asp Pro Leu Asn Pro Gly Leu Asp
        355                 360                 365

Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr Arg Gly Ile Ile
    370                 375                 380

Glu Leu Gly Pro Tyr Leu Leu Asp Arg Gly Ser Leu Tyr Val Asn Gly
385                 390                 395                 400

Phe Thr His Arg Asn Phe Val Pro Ile Thr Ser Thr Pro Gly Thr Ser
                405                 410                 415

Thr Val His Leu Gly Thr Ser Glu Ile His Pro Ser Leu Pro Arg Pro
```

420 425 430

Ile Val Pro Gly Pro Leu
435

<210> 38
<211> 420
<212> PRT
<213> Homo sapiens

<400> 38

Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys
1 5 10 15

Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn
20 25 30

Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser
35 40 45

Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp Arg
50 55 60

Asp Ser Leu Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro Thr
65 70 75 80

Thr Ser Thr Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly Thr
85 90 95

Pro Ser Ser Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile Pro
100 105 110

Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn Met
115 120 125

Gly His Pro Gly Ser Arg Lys Phe Asn Ile Thr Glu Ser Val Leu Gln
130 135 140

Gly Leu Leu Thr Pro Leu Phe Lys Asn Ser Ser Val Gly Pro Leu Tyr
145 150 155 160

Ser Gly Cys Arg Leu Ile Ser Leu Arg Ser Glu Lys Asp Gly Ala Ala
165 170 175

Thr Gly Val Asp Ala Ile Cys Thr His His Leu Asn Pro Gln Ser Pro
180 185 190

Gly Leu Asp Arg Glu Gln Leu Tyr Trp Gln Leu Ser Gln Met Thr Asn

195 200 205

Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr
210 215 220

Val Asn Gly Phe Thr His Arg Ser Leu Gly Leu Thr Thr Ser Thr Pro
225 230 235 240

Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Pro Val
245 250 255

Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Ile Pro Phe Thr Leu Asn
260 265 270

Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn Met Gly His Pro Gly
275 280 285

Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu Gln Gly Leu Leu Arg
290 295 300

Pro Val Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg
305 310 315 320

Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala Ala Thr Lys Val Asp
325 330 335

Ala Ile Cys Thr Tyr Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg
340 345 350

Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu
355 360 365

Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe
370 375 380

Thr Gln Arg Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr Pro Thr
385 390 395 400

Val Asp Leu Gly Thr Ser Gly Thr Pro Val Ser Lys Pro Gly Pro Ser
405 410 415

Ala Ala Ser Pro
420

<210> 39
<211> 439
<212> PRT
<213> Homo sapiens

<400> 39

```
Glu Arg Val Leu Gln Gly Pro Leu Ser Pro Ile Phe Lys Asn Ser Ser
1               5                  10                  15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu
            20                  25                  30

Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro
        35                  40                  45

Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp
65                  70                  75                  80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro
                85                  90                  95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly
            100                 105                 110

Thr Pro Ser Ser Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile
        115                 120                 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn
    130                 135                 140

Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Thr Glu Arg Val Leu
145                 150                 155                 160

Gln Gly Leu Leu Asn Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu
                165                 170                 175

Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala
            180                 185                 190

Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg
        195                 200                 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Cys Glu Leu Ser Gln Leu Thr
    210                 215                 220

His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu
225                 230                 235                 240
```

```
Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro Thr Thr Ser Thr
                245                 250                 255

Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser
            260                 265                 270

Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Leu
        275                 280                 285

Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr
    290                 295                 300

Gly Ser Arg Lys Phe Asn Thr Met Glu Arg Val Leu Gln Gly Leu Leu
305                 310                 315                 320

Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys
                325                 330                 335

Arg Leu Thr Leu Leu Arg Pro Glu Lys His Gly Ala Ala Thr Gly Val
            340                 345                 350

Asp Ala Ile Cys Thr Leu Arg Leu Asp Pro Thr Gly Pro Gly Leu Asp
        355                 360                 365

Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser Val Thr
    370                 375                 380

Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly
385                 390                 395                 400

Phe Thr His Arg Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr Ser
                405                 410                 415

Ala Val His Leu Glu Thr Ser Gly Thr Pro Ala Ser Leu Pro Gly His
            420                 425                 430

Thr Ala Pro Gly Pro Leu Leu
        435


<210>  40
<211>  424
<212>  PRT
<213>  Homo sapiens

<400>  40

Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg
1               5                   10                  15
```

```
Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Tyr Thr His
            20                  25                  30

Arg Leu Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp
        35                  40                  45

Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr
    50                  55                  60

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln Thr Ser
65                  70                  75                  80

Ala Pro Asn Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr
                85                  90                  95

Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Ser Ala Gly Pro Leu
            100                 105                 110

Leu Ile Pro Phe Thr Ile Asn Phe Thr Ile Thr Asn Leu Arg Tyr Glu
        115                 120                 125

Glu Asn Met His His Pro Gly Ser Arg Lys Phe Asn Thr Met Glu Arg
    130                 135                 140

Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly
145                 150                 155                 160

Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp
                165                 170                 175

Gly Val Ala Thr Arg Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro
            180                 185                 190

Lys Ile Pro Gly Leu Asp Arg Gln Gln Leu Tyr Trp Glu Leu Ser Gln
        195                 200                 205

Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp
    210                 215                 220

Ser Leu Tyr Val Asn Gly Phe Thr Gln Arg Ser Ser Val Pro Thr Thr
225                 230                 235                 240

Ser Thr Pro Gly Thr Phe Thr Val Gln Pro Glu Thr Ser Glu Thr Pro
                245                 250                 255

Ser Ser Leu Pro Gly Pro Thr Ala Thr Gly Pro Val Leu Leu Pro Phe
            260                 265                 270
```

```
Thr Leu Asn Phe Thr Ile Ile Asn Leu Gln Tyr Glu Glu Asp Met His
        275                 280                 285

Arg Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly
    290                 295                 300

Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser
305                 310                 315                 320

Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys His Gly Ala Ala Thr
                325                 330                 335

Gly Val Asp Ala Ile Cys Thr Leu Arg Leu Asp Pro Thr Gly Pro Gly
            340                 345                 350

Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser
        355                 360                 365

Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val
    370                 375                 380

Asn Gly Phe Asn Pro Trp Ser Ser Val Pro Thr Thr Ser Thr Pro Gly
385                 390                 395                 400

Thr Ser Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Ser Leu Pro
                405                 410                 415

Gly His Thr Ala Pro Val Pro Leu
            420


<210>  41
<211>  418
<212>  PRT
<213>  Homo sapiens

<400>  41

Thr Leu Leu Arg Pro Lys Lys Asp Gly Val Ala Thr Gly Val Asp Ala
1               5                   10                  15

Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu
            20                  25                  30

Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr Asn Asp Ile Glu Glu Leu
        35                  40                  45

Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr
    50                  55                  60
```

```
His Gln Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Ser Thr Val
65                  70                  75                  80

Asp Leu Arg Thr Ser Gly Thr Pro Ser Ser Leu Ser Ser Pro Thr Ile
                85                  90                  95

Met Ala Ala Gly Pro Leu Leu Ile Pro Phe Thr Ile Asn Phe Thr Ile
            100                 105                 110

Thr Asn Leu Arg Tyr Glu Glu Asn Met His His Pro Gly Ser Arg Lys
        115                 120                 125

Phe Asn Thr Met Glu Arg Val Leu Gln Gly Leu Leu Met Pro Leu Phe
    130                 135                 140

Lys Asn Thr Ser Val Ser Ser Leu Tyr Ser Gly Cys Arg Leu Thr Leu
145                 150                 155                 160

Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Arg Val Asp Ala Val Cys
                165                 170                 175

Thr His Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Arg Leu
            180                 185                 190

Tyr Trp Lys Leu Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro
        195                 200                 205

Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg
    210                 215                 220

Ser Ser Met Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Val
225                 230                 235                 240

Gly Thr Ser Gly Thr Pro Ser Ser Ser Pro Ser Pro Thr Thr Ala Gly
                245                 250                 255

Pro Leu Leu Met Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln
            260                 265                 270

Tyr Glu Glu Asp Met Arg Arg Thr Gly Ser Arg Lys Phe Asn Thr Met
        275                 280                 285

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser
    290                 295                 300

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
305                 310                 315                 320
```

```
Lys His Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr Leu Arg Leu
                325                 330                 335

Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu
            340                 345                 350

Ser Gln Leu Thr Asn Ser Val Thr Glu Leu Gly Pro Tyr Thr Leu Asp
        355                 360                 365

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro
    370                 375                 380

Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly
385                 390                 395                 400

Thr Pro Ala Ser Leu Pro Gly His Thr Ala Pro Gly Pro Leu Leu Ile
                405                 410                 415

Pro Phe
```

<210> 42
<211> 443
<212> PRT
<213> Homo sapiens

<400> 42

```
Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser
1               5                   10                  15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
            20                  25                  30

Lys Asp Gly Val Ala Thr Arg Val Asp Ala Ile Cys Thr His Arg Pro
        35                  40                  45

Asp Pro Lys Ile Pro Gly Leu Asp Arg Gln Gln Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp
65                  70                  75                  80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr Gln Arg Ser Ser Val Pro
                85                  90                  95

Thr Thr Ser Thr Pro Gly Thr Phe Thr Val Gln Pro Glu Thr Ser Glu
            100                 105                 110
```

```
Thr Pro Ser Ser Leu Pro Gly Pro Thr Ala Thr Gly Pro Val Leu Leu
        115                 120                 125

Pro Phe Thr Leu Asn Phe Thr Ile Ile Asn Leu Gln Tyr Glu Glu Asp
    130                 135                 140

Met His Arg Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu
145                 150                 155                 160

Gln Gly Leu Leu Met Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu
                165                 170                 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Gln Glu Ala
            180                 185                 190

Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu Asp Pro Ser Glu
        195                 200                 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr
    210                 215                 220

Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu
225                 230                 235                 240

Tyr Val Asn Gly Phe Thr His Ser Gly Val Leu Cys Pro Pro Pro Ser
                245                 250                 255

Ile Leu Gly Ile Phe Thr Val Gln Pro Glu Thr Phe Glu Thr Pro Ser
            260                 265                 270

Ser Leu Pro Gly Pro Thr Ala Thr Gly Pro Val Leu Leu Pro Phe Thr
        275                 280                 285

Leu Asn Phe Thr Ile Ile Asn Leu Gln Tyr Glu Glu Asp Met His Arg
    290                 295                 300

Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
305                 310                 315                 320

Leu Met Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly
                325                 330                 335

Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Gln Glu Ala Ala Thr Gly
            340                 345                 350

Val Asp Thr Ile Cys Thr His Arg Val Asp Pro Ile Gly Pro Gly Leu
```

355 360 365

Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser Ile
370 375 380

Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn
385 390 395 400

Gly Phe Asn Pro Trp Ser Ser Val Pro Thr Thr Ser Thr Pro Gly Thr
405 410 415

Ser Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Ser Leu Pro Gly
420 425 430

His Thr Ala Pro Val Pro Leu Leu Ile Pro Phe
435 440

<210> 43
<211> 442
<212> PRT
<213> Homo sapiens

<400> 43

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser
1 5 10 15

Leu Glu Tyr Leu Tyr Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu
20 25 30

Lys Asp Ser Ser Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro
35 40 45

Asp Pro Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu
50 55 60

Ser Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp
65 70 75 80

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Met Pro
85 90 95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Val Gly Thr Ser Gly
100 105 110

Thr Pro Ser Ser Ser Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Met
115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp

130 135 140

Met Arg Arg Thr Gly Ser Arg Lys Phe Asn Thr Met Glu Ser Val Leu
145 150 155 160

Gln Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu
165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala
180 185 190

Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser
195 200 205

Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr
210 215 220

Asn Asp Ile Glu Glu Val Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu
225 230 235 240

Tyr Val Asn Gly Phe Thr His Arg Ser Phe Val Ala Pro Thr Ser Thr
245 250 255

Leu Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Ser
260 265 270

Leu Pro Ser Pro Thr Thr Gly Val Pro Leu Leu Ile Pro Phe Thr Leu
275 280 285

Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn Met Gly His Pro
290 295 300

Gly Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu Gln Gly Leu Leu
305 310 315 320

Met Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu Tyr Ser Gly Cys
325 330 335

Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Arg Val
340 345 350

Val Ala Val Cys Thr His Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp
355 360 365

Arg Glu Arg Leu Tyr Trp Lys Leu Ser Gln Leu Thr His Gly Ile Thr
370 375 380

Glu Leu Gly Pro Tyr Thr Leu Asp Arg His Ser Leu Tyr Val Asn Gly
385 390 395 400

Phe Thr His Gln Ser Ser Met Thr Thr Thr Arg Thr Pro Asp Thr Ser
405 410 415

Thr Met His Leu Ala Thr Ser Arg Thr Pro Ala Ser Leu Ser Gly Pro
420 425 430

Thr Thr Ala Ser Pro Leu Leu Ile Pro Phe
435 440

<210> 44
<211> 442
<212> PRT
<213> Homo sapiens

<400> 44

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser
1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
20 25 30

Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu
35 40 45

Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu
50 55 60

Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp
65 70 75 80

Arg Gly Ser Leu Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro
85 90 95

Ile Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu
100 105 110

Thr Pro Ser Ser Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Ile
115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn
130 135 140

Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Thr Glu Arg Val Leu
145 150 155 160

```
Gln Gly Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser Leu Glu Tyr Leu
                165                 170                 175

Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Ser Ser
            180                 185                 190

Thr Met Ala Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro Glu Asp
        195                 200                 205

Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Asn Leu Thr
    210                 215                 220

Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu
225                 230                 235                 240

Tyr Val Asn Gly Phe Thr His Arg Ser Phe Met Pro Thr Thr Ser Thr
                245                 250                 255

Leu Gly Thr Ser Thr Val Asp Val Gly Thr Ser Gly Thr Pro Ser Ser
            260                 265                 270

Ser Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Met Pro Phe Thr Leu
        275                 280                 285

Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr
    290                 295                 300

Gly Ser Arg Lys Phe Asn Thr Met Glu Ser Val Leu Gln Gly Leu Leu
305                 310                 315                 320

Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys
                325                 330                 335

Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala Ala Thr Gly Val
            340                 345                 350

Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn
        355                 360                 365

Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr Asn Asp Ile Glu
    370                 375                 380

Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly
385                 390                 395                 400

Phe Thr His Gln Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Ser
                405                 410                 415
```

```
Thr Val Asp Pro Arg Thr Ser Gly Thr Pro Ser Ser Leu Ser Ser Pro
            420                 425                 430

Thr Ile Met Ala Ala Gly Pro Leu Leu Ile
        435                 440
```

<210> 45
<211> 379
<212> PRT
<213> Homo sapiens

<400> 45

```
Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe Lys Asn Thr Ser
1               5                   10                  15

Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
            20                  25                  30

Lys Asn Gly Ala Ala Thr Gly Met Asp Ala Ile Cys Ser His Arg Leu
        35                  40                  45

Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Gln Leu Thr His Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp
65                  70                  75                  80

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Ala
                85                  90                  95

Pro Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly
            100                 105                 110

Thr Pro Ser Ser Leu Pro Ser Pro Thr Thr Ala Val Pro Leu Leu Ile
        115                 120                 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Lys Tyr Glu Glu Asp
    130                 135                 140

Met His Cys Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu
145                 150                 155                 160

Gln Ser Leu Phe Gly Pro Met Phe Lys Asn Thr Ser Val Gly Pro Leu
                165                 170                 175

Tyr Ser Gly Cys Arg Leu Thr Leu Phe Arg Ser Glu Lys Asp Gly Ala
            180                 185                 190
```

```
Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser
        195                 200                 205

Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr
    210                 215                 220

Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu
225                 230                 235                 240

Tyr Val Asn Gly Phe Thr His Gln Thr Ser Ala Pro Asn Thr Ser Thr
                245                 250                 255

Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Ser
            260                 265                 270

Leu Pro Ser Pro Thr Ser Ala Gly Pro Leu Leu Val Pro Phe Thr Leu
        275                 280                 285

Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr
    290                 295                 300

Gly Ser Arg Lys Phe Asn Thr Met Glu Ser Val Leu Gln Gly Leu Leu
305                 310                 315                 320

Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys
                325                 330                 335

Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Gly Val
            340                 345                 350

Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn
        355                 360                 365

Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu
    370                 375


<210>  46
<211>  439
<212>  PRT
<213>  Homo sapiens


<220>
<221>  MISC_FEATURE
<222>  (1)..(439)
<223>  Any "X" = any amino acid

<400>  46

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser
```

1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
20 25 30

Lys His Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr Leu Arg Leu
35 40 45

Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu
50 55 60

Ser Gln Leu Thr Asn Ser Val Thr Glu Leu Gly Pro Tyr Thr Leu Asp
65 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro
85 90 95

Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly
100 105 110

Thr Pro Ala Ser Leu Pro Gly His Thr Ala Pro Gly Pro Leu Leu Ile
115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu His Tyr Glu Glu Asn
130 135 140

Met Gln His Pro Gly Ser Arg Lys Phe Asn Thr Met Glu Arg Val Leu
145 150 155 160

Gln Gly Cys Leu Val Pro Cys Ser Arg Asn Thr Asn Val Gly Leu Leu
165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa
180 185 190

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
195 200 205

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
210 215 220

Xaa Xaa Xaa Xaa Xaa Xaa Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu
225 230 235 240

Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Ala Pro Thr Ser Thr
245 250 255

```
Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Ser
            260                 265                 270

Leu Pro Ser Pro Thr Thr Val Pro Leu Leu Val Pro Phe Thr Leu Asn
        275                 280                 285

Phe Thr Ile Thr Asn Leu Gln Tyr Gly Glu Asp Met Arg His Pro Gly
    290                 295                 300

Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Gly
305                 310                 315                 320

Pro Leu Phe Lys Asn Ser Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg
                325                 330                 335

Leu Ile Ser Leu Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp
            340                 345                 350

Ala Ile Cys Thr His His Leu Asn Pro Gln Ser Pro Gly Leu Asp Arg
        355                 360                 365

Glu Gln Leu Tyr Trp Gln Leu Ser Gln Val Thr Asn Gly Ile Lys Glu
    370                 375                 380

Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe
385                 390                 395                 400

Thr His Arg Ser Ser Gly Leu Thr Thr Ser Thr Pro Trp Thr Ser Thr
                405                 410                 415

Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Pro Val Pro Ser Pro Thr
            420                 425                 430

Thr Ala Gly Pro Leu Leu Ile
        435
```

<210> 47
<211> 1366
<212> PRT
<213> Homo sapiens

<400> 47

```
Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser
1               5                   10                  15

Leu Glu Tyr Leu Tyr Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu
            20                  25                  30
```

```
Lys Asp Ser Ser Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro
        35                  40                  45

Asp Pro Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp
65                  70                  75                  80

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Met Pro
                85                  90                  95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Val Gly Thr Ser Gly
            100                 105                 110

Thr Pro Ser Ser Ser Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Met
        115                 120                 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp
    130                 135                 140

Met Arg Arg Thr Gly Ser Arg Lys Phe Asn Thr Met Glu Arg Val Leu
145                 150                 155                 160

Gln Gly Pro Leu Ser Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu
                165                 170                 175

Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala
            180                 185                 190

Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg
        195                 200                 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr
    210                 215                 220

His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu
225                 230                 235                 240

Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro Thr Thr Ser Thr
                245                 250                 255

Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser
            260                 265                 270

Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Leu
        275                 280                 285
```

```
Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn Met Gly His Pro
    290                 295                 300

Gly Ser Arg Lys Phe Asn Ile Thr Glu Arg Val Leu Gln Gly Leu Leu
305                 310                 315                 320

Asn Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu Tyr Ser Gly Cys
                325                 330                 335

Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Gly Met
            340                 345                 350

Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg Pro Gly Leu Asp
        355                 360                 365

Arg Glu Gln Leu Tyr Cys Glu Leu Ser Gln Leu Thr His Asn Ile Thr
    370                 375                 380

Glu Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly
385                 390                 395                 400

Phe Thr His Gln Asn Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser
                405                 410                 415

Thr Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser Phe Pro Gly His
            420                 425                 430

Thr Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile
        435                 440                 445

Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr Gly Ser Arg Lys
    450                 455                 460

Phe Asn Thr Met Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe
465                 470                 475                 480

Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu
                485                 490                 495

Leu Arg Pro Glu Lys His Gly Ala Ala Thr Gly Val Asp Ala Ile Cys
            500                 505                 510

Thr Leu Arg Leu Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Arg Leu
        515                 520                 525

Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser Val Thr Glu Leu Gly Pro
    530                 535                 540
```

```
Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg
545                 550                 555                 560

Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu
                565                 570                 575

Glu Thr Ser Gly Thr Pro Ala Ser Leu Pro Gly His Thr Ala Pro Gly
            580                 585                 590

Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln
        595                 600                 605

Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr Thr
    610                 615                 620

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser
625                 630                 635                 640

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
                645                 650                 655

Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu
            660                 665                 670

Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu
        675                 680                 685

Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp
    690                 695                 700

Arg Gly Ser Leu Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro
705                 710                 715                 720

Ile Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu
                725                 730                 735

Thr Pro Ser Ser Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Ile
            740                 745                 750

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn
        755                 760                 765

Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Thr Glu Arg Val Leu
    770                 775                 780

Gln Gly Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser Leu Glu Tyr Leu
```

785 790 795 800

Tyr Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu Lys Asp Ser Ser
805 810 815

Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro Glu Asp
820 825 830

Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Asn Leu Thr
835 840 845

Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu
850 855 860

Tyr Val Asn Gly Phe Thr His Arg Ser Ser Met Pro Thr Thr Ser Thr
865 870 875 880

Pro Gly Thr Ser Thr Val Asp Val Gly Thr Ser Gly Thr Pro Ser Ser
885 890 895

Ser Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Met Pro Phe Thr Leu
900 905 910

Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr
915 920 925

Gly Ser Arg Lys Phe Asn Thr Met Glu Ser Val Leu Gln Gly Leu Leu
930 935 940

Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys
945 950 955 960

Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala Ala Thr Gly Val
965 970 975

Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn
980 985 990

Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr Asn Asp Ile Glu
995 1000 1005

Glu Val Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn
1010 1015 1020

Gly Phe Thr His Arg Ser Phe Val Ala Pro Thr Ser Thr Leu Gly
1025 1030 1035

```
Thr Ser  Thr Val Asp Leu Gly  Thr Ser Gly Thr Pro  Ser Ser Leu
    1040                1045                1050

Pro Ser  Pro Thr Thr Gly Val  Pro Leu Leu Ile Pro  Phe Thr Leu
    1055                1060                1065

Asn Phe  Thr Ile Thr Asn Leu  Gln Tyr Glu Glu Asn  Met Gly His
    1070                1075                1080

Pro Gly  Ser Arg Lys Phe Asn  Ile Met Glu Arg Val  Leu Gln Gly
    1085                1090                1095

Leu Leu  Ser Pro Ile Phe Lys  Asn Ser Ser Val Gly  Ser Leu Tyr
    1100                1105                1110

Ser Gly  Cys Arg Leu Thr Leu  Leu Arg Pro Glu Lys  Asp Gly Ala
    1115                1120                1125

Ala Thr  Arg Val Asp Ala Val  Cys Thr His Arg Pro  Asp Pro Lys
    1130                1135                1140

Ser Pro  Gly Leu Asp Arg Glu  Arg Leu Tyr Trp Lys  Leu Ser Gln
    1145                1150                1155

Leu Thr  His Gly Ile Ile Glu  Leu Gly Pro Tyr Thr  Leu Asp Arg
    1160                1165                1170

His Ser  Phe Tyr Val Asn Gly  Phe Thr His Gln Ser  Ser Met Thr
    1175                1180                1185

Thr Thr  Arg Thr Pro Asp Thr  Ser Thr Met His Leu  Ala Thr Ser
    1190                1195                1200

Arg Thr  Pro Ala Ser Leu Ser  Gly Pro Thr Thr Ala  Ser Pro Leu
    1205                1210                1215

Leu Val  Leu Phe Thr Ile Asn  Phe Thr Ile Thr Asn  Gln Arg Tyr
    1220                1225                1230

Glu Glu  Asn Met His His Pro  Gly Ser Arg Lys Phe  Asn Thr Thr
    1235                1240                1245

Glu Arg  Val Leu Gln Gly Leu  Leu Arg Pro Val Phe  Lys Asn Thr
    1250                1255                1260

Ser Val  Gly Pro Leu Tyr Ser  Gly Cys Arg Leu Thr  Leu Leu Arg
    1265                1270                1275
```

```
Pro Lys  Lys Asp Gly Ala Ala  Thr Lys Val Asp Ala  Ile Cys Thr
    1280                 1285                 1290

Tyr Arg  Pro Asp Pro Lys Ser  Pro Gly Leu Asp Arg  Glu Gln Leu
    1295                 1300                 1305

Tyr Trp  Glu Leu Ser Gln Leu  Thr His Ser Ile Thr  Glu Leu Gly
    1310                 1315                 1320

Pro Tyr  Thr Gln Asp Arg Asp  Ser Leu Tyr Val Asn  Gly Phe Thr
    1325                 1330                 1335

His Arg  Ser Ser Val Pro Thr  Thr Ser Ile Pro Gly  Thr Ser Ala
    1340                 1345                 1350

Val His  Leu Glu Thr Ser Gly  Thr Pro Ala Ser Leu  Pro
    1355                 1360                 1365


<210>  48
<211>  1148
<212>  PRT
<213>  Homo sapiens

<400>  48

Met Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu Tyr Ser Gly Cys
1               5                  10                  15

Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Arg Val
            20                  25                  30

Asp Ala Val Cys Thr His Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp
        35                  40                  45

Arg Glu Arg Leu Tyr Trp Lys Leu Ser Gln Leu Thr His Gly Ile Ile
    50                  55                  60

Glu Leu Gly Pro Tyr Thr Leu Asp Arg His Ser Phe Tyr Val Asn Gly
65                  70                  75                  80

Phe Thr His Gln Ser Ser Met Thr Thr Thr Arg Thr Pro Asp Thr Ser
                85                  90                  95

Thr Met His Leu Ala Thr Ser Arg Thr Pro Ala Ser Leu Ser Gly Pro
            100                 105                 110

Thr Thr Ala Ser Pro Leu Leu Val Leu Phe Thr Ile Asn Phe Thr Ile
        115                 120                 125
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Thr Asn Gln Arg Tyr Glu Glu Asn Met His His Pro Gly Ser Arg Lys
    130                 135                 140

Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Val Phe
145                 150                 155                 160

Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu
                165                 170                 175

Leu Arg Pro Lys Lys Asp Gly Ala Ala Thr Lys Val Asp Ala Ile Cys
            180                 185                 190

Thr Tyr Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu
        195                 200                 205

Tyr Trp Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro
    210                 215                 220

Tyr Thr Gln Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg
225                 230                 235                 240

Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu
                245                 250                 255

Glu Thr Ser Gly Thr Pro Ala Ser Leu Pro Gly Pro Ser Ala Ala Ser
            260                 265                 270

Pro Leu Leu Val Leu Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Arg
        275                 280                 285

Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe Asn Thr Thr
    290                 295                 300

Glu Arg Val Leu Gln Gly Leu Leu Arg Ser Leu Phe Lys Ser Thr Ser
305                 310                 315                 320

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
                325                 330                 335

Lys Asp Gly Thr Ala Thr Gly Val Asp Ala Ile Cys Thr His His Pro
            340                 345                 350

Asp Pro Lys Ser Pro Arg Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu
        355                 360                 365

Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly His Tyr Ala Leu Asp
    370                 375                 380
```

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Asn Asp Ser Leu Phe Val Asn Gly Phe Thr His Arg Ser Ser Val Ser
385                 390                 395                 400

Thr Thr Ser Thr Pro Gly Thr Pro Thr Val Tyr Leu Gly Ala Ser Lys
                405                 410                 415

Thr Pro Ala Ser Ile Phe Gly Pro Ser Ala Ala Ser His Leu Leu Ile
            420                 425                 430

Leu Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Arg Tyr Glu Glu Asn
        435                 440                 445

Met Trp Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln
    450                 455                 460

Gly Leu Leu Arg Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr
465                 470                 475                 480

Ser Gly Ser Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Glu Ala
                485                 490                 495

Thr Gly Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro Thr Gly Pro
            500                 505                 510

Gly Leu Asp Arg Glu Gln Leu Tyr Leu Glu Leu Ser Gln Leu Thr His
        515                 520                 525

Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr
    530                 535                 540

Val Asn Gly Phe Thr His Arg Ser Ser Val Pro Thr Thr Ser Thr Gly
545                 550                 555                 560

Val Val Ser Glu Glu Pro Phe Thr Leu Asn Phe Thr Ile Asn Asn Leu
                565                 570                 575

Arg Tyr Met Ala Asp Met Gly Gln Pro Gly Ser Leu Lys Phe Asn Ile
            580                 585                 590

Thr Asp Asn Val Met Lys His Leu Leu Ser Pro Leu Phe Gln Arg Ser
        595                 600                 605

Ser Leu Gly Ala Arg Tyr Thr Gly Cys Arg Val Ile Ala Leu Arg Ser
    610                 615                 620

Val Lys Asn Gly Ala Glu Thr Arg Val Asp Leu Leu Cys Thr Tyr Leu
```

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Gln Pro Leu Ser Gly Pro Gly Leu Pro Ile Lys Gln Val Phe His Glu
645 650 655

Leu Ser Gln Gln Thr His Gly Ile Thr Arg Leu Gly Pro Tyr Ser Leu
660 665 670

Asp Lys Asp Ser Leu Tyr Leu Asn Gly Tyr Asn Glu Pro Gly Leu Asp
675 680 685

Glu Pro Pro Thr Thr Pro Lys Pro Ala Thr Thr Phe Leu Pro Pro Leu
690 695 700

Ser Glu Ala Thr Thr Ala Met Gly Tyr His Leu Lys Thr Leu Thr Leu
705 710 715 720

Asn Phe Thr Ile Ser Asn Leu Gln Tyr Ser Pro Asp Met Gly Lys Gly
725 730 735

Ser Ala Thr Phe Asn Ser Thr Glu Gly Val Leu Gln His Leu Leu Arg
740 745 750

Pro Leu Phe Gln Lys Ser Ser Met Gly Pro Phe Tyr Leu Gly Cys Gln
755 760 765

Leu Ile Ser Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Gly Val Asp
770 775 780

Thr Thr Cys Thr Tyr His Pro Asp Pro Val Gly Pro Gly Leu Asp Ile
785 790 795 800

Gln Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Gly Val Thr Gln
805 810 815

Leu Gly Phe Tyr Val Leu Asp Arg Asp Ser Leu Phe Ile Asn Gly Tyr
820 825 830

Ala Pro Gln Asn Leu Ser Ile Arg Gly Glu Tyr Gln Ile Asn Phe His
835 840 845

Ile Val Asn Trp Asn Leu Ser Asn Pro Asp Pro Thr Ser Ser Glu Tyr
850 855 860

Ile Thr Leu Leu Arg Asp Ile Gln Asp Lys Val Thr Thr Leu Tyr Lys
865 870 875 880

```
Gly Ser Gln Leu His Asp Thr Phe Arg Phe Cys Leu Val Thr Asn Leu
                885                 890                 895

Thr Met Asp Ser Val Leu Val Thr Val Lys Ala Leu Phe Ser Ser Asn
            900                 905                 910

Leu Asp Pro Ser Leu Val Glu Gln Val Phe Leu Asp Lys Thr Leu Asn
        915                 920                 925

Ala Ser Phe His Trp Leu Gly Ser Thr Tyr Gln Leu Val Asp Ile His
    930                 935                 940

Val Thr Glu Met Glu Ser Ser Val Tyr Gln Pro Thr Ser Ser Ser Ser
945                 950                 955                 960

Thr Gln His Phe Tyr Leu Asn Phe Thr Ile Thr Asn Leu Pro Tyr Ser
                965                 970                 975

Gln Asp Lys Ala Gln Pro Gly Thr Thr Asn Tyr Gln Arg Asn Lys Arg
            980                 985                 990

Asn Ile Glu Asp Ala Leu Asn Gln  Leu Phe Arg Asn Ser  Ser Ile Lys
        995                 1000                1005

Ser Tyr  Phe Ser Asp Cys Gln  Val Ser Thr Phe Arg  Ser Val Pro
    1010                1015                1020

Asn Arg  His His Thr Gly Val  Asp Ser Leu Cys Asn  Phe Ser Pro
    1025                1030                1035

Leu Ala  Arg Arg Val Asp Arg  Val Ala Ile Tyr Glu  Glu Phe Leu
    1040                1045                1050

Arg Met  Thr Arg Asn Gly Thr  Gln Leu Gln Asn Phe  Thr Leu Asp
    1055                1060                1065

Arg Ser  Ser Val Leu Val Asp  Gly Tyr Ser Pro Asn  Arg Asn Glu
    1070                1075                1080

Pro Leu  Thr Gly Asn Ser Asp  Leu Pro Phe Trp Ala  Val Ile Leu
    1085                1090                1095

Ile Gly  Leu Ala Gly Leu Leu  Gly Leu Ile Thr Cys  Leu Ile Cys
    1100                1105                1110

Gly Val  Leu Val Thr Thr Arg  Arg Arg Lys Lys Glu  Gly Glu Tyr
    1115                1120                1125
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Asn Val Gln Gln Gln Cys Pro Gly Tyr Tyr Gln Ser His Leu Asp
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Leu Glu Asp Leu Gln
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            20                  25                  30

Lys Asp Ser Ser Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro
        35                  40                  45

Asp Pro Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp
65                  70                  75                  80

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Met Pro
                85                  90                  95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Val Gly Thr Ser Gly
            100                 105                 110

Thr Pro Ser Ser Ser Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Met
        115                 120                 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp
    130                 135                 140

Met Arg Arg Thr Gly Ser Arg Lys Phe Asn Thr Met Glu Arg Val Leu
145                 150                 155                 160

Gln Gly Pro Leu Ser Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu
                165                 170                 175

Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala
            180                 185                 190

Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg
        195                 200                 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr
    210                 215                 220

His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu
225                 230                 235                 240

Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro Thr Thr Ser Thr
                245                 250                 255
```

```
Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser
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Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Leu
        275                 280                 285

Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn Met Gly His Pro
    290                 295                 300

Gly Ser Arg Lys Phe Asn Ile Thr Glu Arg Val Leu Gln Gly Leu Leu
305                 310                 315                 320

Asn Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu Tyr Ser Gly Cys
                325                 330                 335

Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Gly Met
            340                 345                 350

Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg Pro Gly Leu Asp
        355                 360                 365

Arg Glu Gln Leu Tyr Cys Glu Leu Ser Gln Leu Thr His Asn Ile Thr
    370                 375                 380

Glu Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly
385                 390                 395                 400

Phe Thr His Gln Asn Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser
                405                 410                 415

Thr Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser Phe Pro Gly His
            420                 425                 430

Thr Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile
        435                 440                 445

Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr Gly Ser Arg Lys
    450                 455                 460

Phe Asn Thr Met Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe
465                 470                 475                 480

Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu
                485                 490                 495

Leu Arg Pro Glu Lys His Gly Ala Ala Thr Gly Val Asp Ala Ile Cys
            500                 505                 510
```

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Thr Leu Arg Leu Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Arg Leu
        515                 520                 525

Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser Val Thr Glu Leu Gly Pro
    530                 535                 540

Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg
545                 550                 555                 560

Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu
                565                 570                 575

Glu Thr Ser Gly Thr Pro Ala Ser Leu Pro Gly His Thr Ala Pro Gly
            580                 585                 590

Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln
        595                 600                 605

Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr Thr
    610                 615                 620

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser
625                 630                 635                 640

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
                645                 650                 655

Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu
            660                 665                 670

Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu
        675                 680                 685

Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp
    690                 695                 700

Arg Gly Ser Leu Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro
705                 710                 715                 720

Ile Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu
                725                 730                 735

Thr Pro Ser Ser Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Ile
            740                 745                 750

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn
        755                 760                 765
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Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Thr Glu Arg Val Leu
    770                 775                 780

Gln Gly Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser Leu Glu Tyr Leu
785                 790                 795                 800

Tyr Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu Lys Asp Ser Ser
                805                 810                 815

Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro Glu Asp
            820                 825                 830

Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Asn Leu Thr
        835                 840                 845

Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu
    850                 855                 860

Tyr Val Asn Gly Phe Thr His Arg Ser Ser Met Pro Thr Thr Ser Thr
865                 870                 875                 880

Pro Gly Thr Ser Thr Val Asp Val Gly Thr Ser Gly Thr Pro Ser Ser
                885                 890                 895

Ser Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Met Pro Phe Thr Leu
            900                 905                 910

Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr
        915                 920                 925

Gly Ser Arg Lys Phe Asn Thr Met Glu Ser Val Leu Gln Gly Leu Leu
    930                 935                 940

Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys
945                 950                 955                 960

Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala Ala Thr Gly Val
                965                 970                 975

Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn
            980                 985                 990

Arg Glu Gln Leu Tyr Trp Glu Leu  Ser Lys Leu Thr Asn  Asp Ile Glu
        995                 1000                1005

Glu Val  Gly Pro Tyr Thr Leu  Asp Arg Asn Ser Leu  Tyr Val Asn
```

1010 1015 1020

Gly Phe Thr His Arg Ser Phe Val Ala Pro Thr Ser Thr Leu Gly
1025 1030 1035

Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Ser Leu
1040 1045 1050

Pro Ser Pro Thr Thr Gly Val Pro Leu Leu Ile Pro Phe Thr Leu
1055 1060 1065

Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn Met Gly His
1070 1075 1080

Pro Gly Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu Gln Gly
1085 1090 1095

Leu Leu Ser Pro Ile Phe Lys Asn Ser Ser Val Gly Ser Leu Tyr
1100 1105 1110

Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala
1115 1120 1125

Ala Thr Arg Val Asp Ala Val Cys Thr His Arg Pro Asp Pro Lys
1130 1135 1140

Ser Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Lys Leu Ser Gln
1145 1150 1155

Leu Thr His Gly Ile Ile Glu Leu Gly Pro Tyr Thr Leu Asp Arg
1160 1165 1170

His Ser Phe Tyr Val Asn Gly Phe Thr His Gln Ser Ser Met Thr
1175 1180 1185

Thr Thr Arg Thr Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser
1190 1195 1200

Arg Thr Pro Ala Ser Leu Ser Gly Pro Thr Thr Ala Ser Pro Leu
1205 1210 1215

Leu Val Leu Phe Thr Ile Asn Phe Thr Ile Thr Asn Gln Arg Tyr
1220 1225 1230

Glu Glu Asn Met His His Pro Gly Ser Arg Lys Phe Asn Thr Thr
1235 1240 1245

```
Glu Arg  Val Leu Gln Gly Leu  Leu Arg Pro Val Phe  Lys Asn Thr
    1250                 1255                 1260

Ser Val  Gly Pro Leu Tyr Ser  Gly Cys Arg Leu Thr  Leu Leu Arg
    1265                 1270                 1275

Pro Lys  Lys Asp Gly Ala Ala  Thr Lys Val Asp Ala  Ile Cys Thr
    1280                 1285                 1290

Tyr Arg  Pro Asp Pro Lys Ser  Pro Gly Leu Asp Arg  Glu Gln Leu
    1295                 1300                 1305

Tyr Trp  Glu Leu Ser Gln Leu  Thr His Ser Ile Thr  Glu Leu Gly
    1310                 1315                 1320

Pro Tyr  Thr Gln Asp Arg Asp  Ser Leu Tyr Val Asn  Gly Phe Thr
    1325                 1330                 1335

His Arg  Ser Ser Val Pro Thr  Thr Ser Ile Pro Gly  Thr Ser Ala
    1340                 1345                 1350

Val His  Leu Glu Thr Ser Gly  Thr Pro Ala Ser Leu  Pro Gly Pro
    1355                 1360                 1365

Ser Ala  Ala Ser Pro Leu Leu  Val Leu Phe Thr Leu  Asn Phe Thr
    1370                 1375                 1380

Ile Thr  Asn Leu Arg Tyr Glu  Glu Asn Met Gln His  Pro Gly Ser
    1385                 1390                 1395

Arg Lys  Phe Asn Thr Thr Glu  Arg Val Leu Gln Gly  Leu Leu Arg
    1400                 1405                 1410

Ser Leu  Phe Lys Ser Thr Ser  Val Gly Pro Leu Tyr  Ser Gly Cys
    1415                 1420                 1425

Arg Leu  Thr Leu Leu Arg Pro  Glu Lys Asp Gly Thr  Ala Thr Gly
    1430                 1435                 1440

Val Asp  Ala Ile Cys Thr His  His Pro Asp Pro Lys  Ser Pro Arg
    1445                 1450                 1455

Leu Asp  Arg Glu Gln Leu Tyr  Trp Glu Leu Ser Gln  Leu Thr His
    1460                 1465                 1470

Asn Ile  Thr Glu Leu Gly His  Tyr Ala Leu Asp Asn  Asp Ser Leu
    1475                 1480                 1485
```

```
Phe Val  Asn Gly Phe Thr His  Arg Ser Ser Val Ser  Thr Thr Ser
    1490                 1495                 1500

Thr Pro  Gly Thr Pro Thr Val  Tyr Leu Gly Ala Ser  Lys Thr Pro
    1505                 1510                 1515

Ala Ser  Ile Phe Gly Pro Ser  Ala Ala Ser His Leu  Leu Ile Leu
    1520                 1525                 1530

Phe Thr  Leu Asn Phe Thr Ile  Thr Asn Leu Arg Tyr  Glu Glu Asn
    1535                 1540                 1545

Met Trp  Pro Gly Ser Arg Lys  Phe Asn Thr Thr Glu  Arg Val Leu
    1550                 1555                 1560

Gln Gly  Leu Leu Arg Pro Leu  Phe Lys Asn Thr Ser  Val Gly Pro
    1565                 1570                 1575

Leu Tyr  Ser Gly Ser Arg Leu  Thr Leu Leu Arg Pro  Glu Lys Asp
    1580                 1585                 1590

Gly Glu  Ala Thr Gly Val Asp  Ala Ile Cys Thr His  Arg Pro Asp
    1595                 1600                 1605

Pro Thr  Gly Pro Gly Leu Asp  Arg Glu Gln Leu Tyr  Leu Glu Leu
    1610                 1615                 1620

Ser Gln  Leu Thr His Ser Ile  Thr Glu Leu Gly Pro  Tyr Thr Leu
    1625                 1630                 1635

Asp Arg  Asp Ser Leu Tyr Val  Asn Gly Phe Thr His  Arg Ser Ser
    1640                 1645                 1650

Val Pro  Thr Thr Ser Thr Gly  Val Val Ser Glu Glu  Pro Phe Thr
    1655                 1660                 1665

Leu Asn  Phe Thr Ile Asn Asn  Leu Arg Tyr Met Ala  Asp Met Gly
    1670                 1675                 1680

Gln Pro  Gly Ser Leu Lys Phe  Asn Ile Thr Asp Asn  Val Met Lys
    1685                 1690                 1695

His Leu  Leu Ser Pro Leu Phe  Gln Arg Ser Ser Leu  Gly Ala Arg
    1700                 1705                 1710

Tyr Thr  Gly Cys Arg Val Ile  Ala Leu Arg Ser Val  Lys Asn Gly
    1715                 1720                 1725
```

```
Ala Glu  Thr Arg Val Asp Leu  Leu Cys Thr Tyr Leu  Gln Pro Leu
    1730                 1735                 1740

Ser Gly  Pro Gly Leu Pro Ile  Lys Gln Val Phe His  Glu Leu Ser
    1745                 1750                 1755

Gln Gln  Thr His Gly Ile Thr  Arg Leu Gly Pro Tyr  Ser Leu Asp
    1760                 1765                 1770

Lys Asp  Ser Leu Tyr Leu Asn  Gly Tyr Asn Glu Pro  Gly Leu Asp
    1775                 1780                 1785

Glu Pro  Pro Thr Thr Pro Lys  Pro Ala Thr Thr Phe  Leu Pro Pro
    1790                 1795                 1800

Leu Ser  Glu Ala Thr Thr Ala  Met Gly Tyr His Leu  Lys Thr Leu
    1805                 1810                 1815

Thr Leu  Asn Phe Thr Ile Ser  Asn Leu Gln Tyr Ser  Pro Asp Met
    1820                 1825                 1830

Gly Lys  Gly Ser Ala Thr Phe  Asn Ser Thr Glu Gly  Val Leu Gln
    1835                 1840                 1845

His Leu  Leu Arg Pro Leu Phe  Gln Lys Ser Ser Met  Gly Pro Phe
    1850                 1855                 1860

Tyr Leu  Gly Cys Gln Leu Ile  Ser Leu Arg Pro Glu  Lys Asp Gly
    1865                 1870                 1875

Ala Ala  Thr Gly Val Asp Thr  Thr Cys Thr Tyr His  Pro Asp Pro
    1880                 1885                 1890

Val Gly  Pro Gly Leu Asp Ile  Gln Gln Leu Tyr Trp  Glu Leu Ser
    1895                 1900                 1905

Gln Leu  Thr His Gly Val Thr  Gln Leu Gly Phe Tyr  Val Leu Asp
    1910                 1915                 1920

Arg Asp  Ser Leu Phe Ile Asn  Gly Tyr Ala Pro Gln  Asn Leu Ser
    1925                 1930                 1935

Ile Arg  Gly Glu Tyr Gln Ile  Asn Phe His Ile Val  Asn Trp Asn
    1940                 1945                 1950

Leu Ser  Asn Pro Asp Pro Thr  Ser Ser Glu Tyr Ile  Thr Leu Leu
```

1955 1960 1965

Arg Asp Ile Gln Asp Lys Val Thr Thr Leu Tyr Lys Gly Ser Gln
1970 1975 1980

Leu His Asp Thr Phe Arg Phe Cys Leu Val Thr Asn Leu Thr Met
1985 1990 1995

Asp Ser Val Leu Val Thr Val Lys Ala Leu Phe Ser Ser Asn Leu
2000 2005 2010

Asp Pro Ser Leu Val Glu Gln Val Phe Leu Asp Lys Thr Leu Asn
2015 2020 2025

Ala Ser Phe His Trp Leu Gly Ser Thr Tyr Gln Leu Val Asp Ile
2030 2035 2040

His Val Thr Glu Met Glu Ser Ser Val Tyr Gln Pro Thr Ser Ser
2045 2050 2055

Ser Ser Thr Gln His Phe Tyr Leu Asn Phe Thr Ile Thr Asn Leu
2060 2065 2070

Pro Tyr Ser Gln Asp Lys Ala Gln Pro Gly Thr Thr Asn Tyr Gln
2075 2080 2085

Arg Asn Lys Arg Asn Ile Glu Asp Ala Leu Asn Gln Leu Phe Arg
2090 2095 2100

Asn Ser Ser Ile Lys Ser Tyr Phe Ser Asp Cys Gln Val Ser Thr
2105 2110 2115

Phe Arg Ser Val Pro Asn Arg His His Thr Gly Val Asp Ser Leu
2120 2125 2130

Cys Asn Phe Ser Pro Leu Ala Arg Arg Val Asp Arg Val Ala Ile
2135 2140 2145

Tyr Glu Glu Phe Leu Arg Met Thr Arg Asn Gly Thr Gln Leu Gln
2150 2155 2160

Asn Phe Thr Leu Asp Arg Ser Ser Val Leu Val Asp Gly Tyr Ser
2165 2170 2175

Pro Asn Arg Asn Glu Pro Leu Thr Gly Asn Ser Asp Leu Pro Phe
2180 2185 2190

Trp Ala Val Ile Leu Ile Gly Leu Ala Gly Leu Leu Gly Leu Ile
2195 2200 2205

Thr Cys Leu Ile Cys Gly Val Leu Val Thr Thr Arg Arg Arg Lys
2210 2215 2220

Lys Glu Gly Glu Tyr Asn Val Gln Gln Gln Cys Pro Gly Tyr Tyr
2225 2230 2235

Gln Ser His Leu Asp Leu Glu Asp Leu Gln
2240 2245

<210> 51
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Primer

<400> 51
cagcagagac cagcacgagt actc 24

<210> 52
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Primer

<400> 52
tccactgcca tggctgagct 20

<210> 53
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Primer

<400> 53
ccagcacagc tcttcccagg ac 22

<210> 54
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Primer

<400> 54
ggaatggctg agctgacgtc tg 22

<210> 55
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Primer

<400> 55
cttcccagga caacctcaag g 21

<210> 56
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Primer

<400> 56
gcaggatgag tgagccacgt g 21

<210> 57
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Primer

<400> 57
gtcagatctg gtgacctcac tg 22

<210> 58
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Primer

<400> 58
gaggcactgg aaagcccaga g 21

<210> 59
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Primer

<400> 59
ctgatggcat tatggaacac atcac 25

<210> 60
<211> 22

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Primer

<400> 60
cccagaacga gagaccagtg ag 22

<210> 61
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Primer

<400> 61
gctgatggcg atgaatgaac actg 24

<210> 62
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Primer

<400> 62
cccagaacga gagaccagtg ag 22

<210> 63
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Primer

<400> 63
cgcggatccg aacactgcgt ttgctggctt tgatg 35

<210> 64
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Primer

<400> 64
cctctgtgtg ctgcttcatt ggg 23

<210> 65
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Primer

<400> 65
accggatcca tgggccacac agagcctggc cc 32

<210> 66
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Primer

<400> 66
tgtaagctta ggcagggagg atggagtcc 29

<210> 67
<211> 507
<212> DNA
<213> Homo sapien

<400> 67
atgagaggat cgcatcacca tcaccatcac ggatccatgg gccacacaga gcctggccct 60

ctcctgatac cattcacttt caactttacc atcaccaacc tgcattatga ggaaaacatg 120

caacaccctg gttccaggaa gttcaacacc acggagaggg ttctgcaggg tctgctcaag 180

cccttgttca agaacaccag tgttggccct ctgtactctg gctgcagact gaccttgctc 240

agacctgaga agcatgaggc agccactgga gtggacacca tctgtaccca ccgcgttgat 300

cccatcggac ctggactgga cagagagcgg ctatactggg agctgagcca gctgaccaac 360

agcatcacag agctgggacc ctacaccctg gacagggaca gtctctatgt caatggcttc 420

aaccctcgga gctctgtgcc aaccaccagc actcctggga cctccacagt gcacctggca 480

acctctggga ctccatcctc cctgcct 507

<210> 68
<211> 169
<212> PRT
<213> Homo sapiens

<400> 68

Met Arg Gly Ser His His His His His His Gly Ser Met Gly His Thr
1 5 10 15

Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Phe Asn Phe Thr Ile Thr
20 25 30

Asn Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe
35 40 45

```
Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys
    50                  55                  60

Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu
65                  70                  75                  80

Arg Pro Glu Lys His Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr
                85                  90                  95

His Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr
            100                 105                 110

Trp Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr
        115                 120                 125

Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Arg Ser
    130                 135                 140

Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala
145                 150                 155                 160

Thr Ser Gly Thr Pro Ser Ser Leu Pro
                165
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<210> 69
<211> 909
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (1)..(909)
<223> Any "X" = any amino acid

<400> 69

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Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe Lys Asn Thr Ser
1               5                   10                  15

Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys
            20                  25                  30

Lys Asp Gly Ala Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro
        35                  40                  45

Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp
65                  70                  75                  80
```

```
Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr Gln Arg Ser Ser Val Pro
                85                  90                  95

Thr Thr Ser Ile Pro Gly Thr Pro Thr Val Asp Leu Gly Thr Ser Gly
            100                 105                 110

Thr Pro Val Ser Lys Pro Gly Pro Ser Ala Ala Ser Pro Leu Leu Ile
        115                 120                 125

Pro Phe Thr Ile Asn Phe Thr Ile Thr Asn Leu Arg Tyr Glu Glu Asn
    130                 135                 140

Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu
145                 150                 155                 160

Gln Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu
                165                 170                 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala
            180                 185                 190

Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser
        195                 200                 205

Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr
    210                 215                 220

Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu
225                 230                 235                 240

Tyr Val Asn Gly Phe Thr His Gln Ser Ser Val Ser Thr Thr Ser Thr
                245                 250                 255

Pro Gly Thr Ser Thr Val Asp Leu Arg Thr Ser Gly Thr Pro Ser Ser
            260                 265                 270

Leu Ser Ser Pro Thr Ile Met Ala Ala Gly Pro Leu Leu Ile Pro Phe
        275                 280                 285

Thr Ile Asn Phe Thr Ile Thr Asn Leu Arg Tyr Glu Glu Asn Met His
    290                 295                 300

His Pro Gly Ser Arg Lys Phe Asn Thr Met Glu Arg Val Leu Gln Gly
305                 310                 315                 320

Leu Leu Met Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu Tyr Ser
```

325 330 335

Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr
340 345 350

Arg Val Asp Ala Val Cys Thr His Arg Pro Asp Pro Lys Ser Pro Gly
355 360 365

Leu Asp Arg Glu Arg Leu Tyr Trp Lys Leu Ser Gln Leu Thr His Gly
370 375 380

Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val
385 390 395 400

Asn Gly Phe Thr His Arg Ser Ser Met Pro Thr Thr Ser Thr Pro Gly
405 410 415

Thr Ser Thr Val Asp Val Gly Thr Ser Gly Thr Pro Ser Ser Ser Pro
420 425 430

Ser Pro Thr Thr Ala Gly Pro Leu Leu Met Pro Phe Thr Leu Asn Phe
435 440 445

Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr Gly Ser
450 455 460

Arg Lys Phe Asn Thr Met Glu Arg Val Leu Gln Gly Leu Leu Lys Pro
465 470 475 480

Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu
485 490 495

Thr Leu Leu Arg Pro Glu Lys His Gly Ala Ala Thr Gly Val Asp Ala
500 505 510

Ile Cys Thr Leu Arg Leu Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu
515 520 525

Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser Val Thr Glu Leu
530 535 540

Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr
545 550 555 560

His Arg Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr Ser Ala Val
565 570 575

```
His Leu Glu Thr Ser Gly Thr Pro Ala Ser Leu Pro Gly His Thr Ala
            580                 585                 590

Pro Gly Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn
        595                 600                 605

Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe Asn
    610                 615                 620

Thr Met Glu Arg Val Leu Gln Gly Cys Leu Val Pro Cys Ser Arg Asn
625                 630                 635                 640

Thr Asn Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg
                645                 650                 655

Xaa Glu Lys Xaa Xaa Ala Ala Thr Xaa Val Asp Xaa Xaa Cys Xaa Xaa
            660                 665                 670

Xaa Xaa Asp Pro Xaa Xaa Pro Gly Leu Asp Arg Glu Xaa Leu Tyr Trp
        675                 680                 685

Glu Leu Ser Xaa Leu Thr Xaa Xaa Ile Xaa Glu Leu Gly Pro Tyr Thr
    690                 695                 700

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser
705                 710                 715                 720

Val Ala Pro Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr
                725                 730                 735

Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Thr Val Pro Leu Leu
            740                 745                 750

Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Gly Glu
        755                 760                 765

Asp Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val
    770                 775                 780

Leu Gln Gly Leu Leu Gly Pro Leu Phe Lys Asn Ser Ser Val Gly Pro
785                 790                 795                 800

Leu Tyr Ser Gly Cys Arg Leu Ile Ser Leu Arg Ser Glu Lys Asp Gly
                805                 810                 815

Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His His Leu Asn Pro Gln
            820                 825                 830
```

```
Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Gln Leu Ser Gln Val
        835                 840                 845

Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser
    850                 855                 860

Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Gly Leu Thr Thr Ser
865                 870                 875                 880

Thr Pro Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser
                885                 890                 895

Pro Val Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Ile
            900                 905

<210>  70
<211>  525
<212>  PRT
<213>  Homo sapiens

<400>  70

Gln Gly Leu Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly Leu Leu
1               5                   10                  15

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Arg Gly Ala
            20                  25                  30

Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu Asp Pro Leu Asn
        35                  40                  45

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr
    50                  55                  60

Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp Arg Gly Ser Leu
65                  70                  75                  80

Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro Ile Thr Ser Thr
                85                  90                  95

Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu Thr Pro Ser Ser
            100                 105                 110

Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Val Pro Phe Thr Leu
        115                 120                 125

Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Ala Met Arg His Pro
    130                 135                 140
```

```
Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu
145                 150                 155                 160

Arg Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu Tyr Ser Gly Cys
                165                 170                 175

Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Arg Val
            180                 185                 190

Asp Ala Ala Cys Thr Tyr Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp
        195                 200                 205

Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Ser Ile Thr
    210                 215                 220

Glu Leu Gly Pro Tyr Thr Leu Asp Arg Val Ser Leu Tyr Val Asn Gly
225                 230                 235                 240

Phe Asn Pro Arg Ser Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser
                245                 250                 255

Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Ser Leu Pro Gly His
            260                 265                 270

Thr Ala Pro Val Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile
        275                 280                 285

Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys
    290                 295                 300

Phe Asn Thr Met Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Leu Phe
305                 310                 315                 320

Lys Asn Thr Ser Ile Gly Pro Leu Tyr Ser Ser Cys Arg Leu Thr Leu
                325                 330                 335

Leu Arg Pro Glu Lys Asp Lys Ala Ala Thr Arg Val Asp Ala Ile Cys
            340                 345                 350

Thr His His Pro Asp Pro Gln Ser Pro Gly Leu Asn Arg Glu Gln Leu
        355                 360                 365

Tyr Trp Glu Leu Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro
    370                 375                 380

Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asp Gly Phe Thr His Trp
385                 390                 395                 400
```

```
Ser Pro Ile Pro Thr Thr Ser Thr Pro Gly Thr Ser Ile Val Asn Leu
                405                 410                 415

Gly Thr Ser Gly Ile Pro Pro Ser Leu Pro Glu Thr Thr Ala Thr Gly
            420                 425                 430

Pro Leu Leu Ile Pro Phe Thr Pro Asn Phe Thr Ile Thr Asn Leu Gln
        435                 440                 445

Tyr Glu Glu Asp Met Arg Arg Thr Gly Ser Arg Lys Phe Asn Thr Met
    450                 455                 460

Glu Arg Val Leu Gln Gly Leu Leu Ser Pro Ile Phe Lys Asn Ser Ser
465                 470                 475                 480

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu
                485                 490                 495

Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro
            500                 505                 510

Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr
        515                 520                 525


<210>  71
<211>  594
<212>  PRT
<213>  Homo sapiens

<400>  71

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser
1               5                   10                  15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
            20                  25                  30

Lys Asp Gly Val Ala Thr Arg Val Asp Ala Ile Cys Thr His Arg Pro
        35                  40                  45

Asp Pro Lys Ile Pro Gly Leu Asp Arg Gln Gln Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp
65                  70                  75                  80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr Gln Arg Ser Ser Val Pro
                85                  90                  95
```

```
Thr Thr Ser Thr Pro Gly Thr Phe Thr Val Gln Pro Glu Thr Ser Glu
            100                 105                 110

Thr Pro Ser Ser Leu Pro Gly Pro Thr Ala Thr Gly Pro Val Leu Leu
        115                 120                 125

Pro Phe Thr Leu Asn Phe Thr Ile Ile Asn Leu Gln Tyr Glu Glu Asp
    130                 135                 140

Met His Arg Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu
145                 150                 155                 160

Gln Gly Leu Leu Met Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu
                165                 170                 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Gln Glu Ala
            180                 185                 190

Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu Asp Pro Ser Glu
        195                 200                 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr
    210                 215                 220

Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu
225                 230                 235                 240

Tyr Val Asn Gly Phe Thr His Ser Gly Val Leu Cys Pro Pro Pro Ser
                245                 250                 255

Ile Leu Gly Ile Phe Thr Val Gln Pro Glu Thr Phe Glu Thr Pro Ser
            260                 265                 270

Ser Leu Pro Gly Pro Thr Ala Thr Gly Pro Val Leu Leu Pro Phe Thr
        275                 280                 285

Leu Asn Phe Thr Ile Ile Asn Leu Gln Tyr Glu Glu Asp Met His Arg
    290                 295                 300

Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
305                 310                 315                 320

Leu Thr Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly
                325                 330                 335

Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Gln Glu Ala Ala Thr Gly
```

340 345 350

Val Asp Thr Ile Cys Thr His Arg Val Asp Pro Ile Gly Pro Gly Leu
355 360 365

Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser Ile
370 375 380

Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn
385 390 395 400

Gly Phe Asn Pro Trp Ser Ser Val Pro Thr Thr Ser Thr Pro Gly Thr
405 410 415

Ser Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Ser Leu Pro Gly
420 425 430

His Thr Ala Pro Val Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr
435 440 445

Ile Thr Asn Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg
450 455 460

Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu
465 470 475 480

Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr
485 490 495

Leu Leu Arg Pro Glu Lys His Gly Ala Ala Thr Gly Val Asp Ala Ile
500 505 510

Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln
515 520 525

Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly
530 535 540

Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His
545 550 555 560

Trp Ile Pro Val Pro Thr Ser Ser Thr Pro Gly Thr Ser Thr Val Asp
565 570 575

Leu Gly Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Thr Ala Gly
580 585 590

Pro Leu

<210> 72
<211> 424
<212> PRT
<213> Homo sapiens

<400> 72

Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg
1 5 10 15

Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Tyr Thr His
20 25 30

Arg Leu Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp
35 40 45

Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr
50 55 60

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln Thr Ser
65 70 75 80

Ala Pro Asn Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr
85 90 95

Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Ser Ala Gly Pro Leu
100 105 110

Leu Ile Pro Phe Thr Ile Asn Phe Thr Ile Thr Asn Leu Arg Tyr Glu
115 120 125

Glu Asn Met His His Pro Gly Ser Arg Lys Phe Asn Thr Met Glu Arg
130 135 140

Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly
145 150 155 160

Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp
165 170 175

Gly Val Ala Thr Arg Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro
180 185 190

Lys Ile Pro Gly Leu Asp Arg Gln Gln Leu Tyr Trp Glu Leu Ser Gln
195 200 205

```
Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp
    210                 215                 220

Ser Leu Tyr Val Asn Gly Phe Thr Gln Arg Ser Ser Val Pro Thr Thr
225                 230                 235                 240

Ser Thr Pro Gly Thr Phe Thr Val Gln Pro Glu Thr Ser Glu Thr Pro
                245                 250                 255

Ser Ser Leu Pro Gly Pro Thr Ala Thr Gly Pro Val Leu Leu Pro Phe
            260                 265                 270

Thr Leu Asn Phe Thr Ile Ile Asn Leu Gln Tyr Glu Glu Asp Met His
        275                 280                 285

Arg Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly
    290                 295                 300

Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser
305                 310                 315                 320

Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys His Gly Ala Ala Thr
                325                 330                 335

Gly Val Asp Ala Ile Cys Thr Leu Arg Leu Asp Pro Thr Gly Pro Gly
            340                 345                 350

Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser
        355                 360                 365

Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val
    370                 375                 380

Asn Gly Phe Asn Pro Trp Ser Ser Val Pro Thr Thr Ser Thr Pro Gly
385                 390                 395                 400

Thr Ser Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Ser Leu Pro
                405                 410                 415

Gly His Thr Ala Pro Val Pro Leu
            420

<210>  73
<211>  286
<212>  PRT
<213>  Homo sapiens

<400>  73
```

```
Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser
1               5                  10                  15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
            20                  25                  30

Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu
        35                  40                  45

Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp
65                  70                  75                  80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro
                85                  90                  95

Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly
            100                 105                 110

Thr Pro Ala Ser Leu Pro Gly His Thr Ala Pro Gly Pro Leu Leu Val
        115                 120                 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp
    130                 135                 140

Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu
145                 150                 155                 160

Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu
                165                 170                 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Arg Gly Ala
            180                 185                 190

Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu Asp Pro Leu Asn
        195                 200                 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr
    210                 215                 220

Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp Arg Gly Ser Leu
225                 230                 235                 240

Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro Ile Thr Ser Thr
                245                 250                 255
```

```
Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu Thr Pro Ser Ser
            260                 265                 270

Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Ile Pro Phe
        275                 280                 285


<210>  74
<211>  286
<212>  PRT
<213>  Homo sapiens

<400>  74

Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Val Phe Lys Asn Thr Ser
1               5                   10                  15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys
            20                  25                  30

Lys Asp Gly Ala Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro
        35                  40                  45

Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp
65                  70                  75                  80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr Gln Arg Ser Ser Val Pro
                85                  90                  95

Thr Thr Ser Ile Pro Gly Thr Pro Thr Val Asp Leu Gly Thr Ser Gly
            100                 105                 110

Thr Pro Val Ser Lys Pro Gly Pro Ser Ala Ala Ser Pro Leu Leu Val
        115                 120                 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp
    130                 135                 140

Met His Arg Pro Gly Ser Arg Lys Phe Asn Ala Thr Glu Arg Val Leu
145                 150                 155                 160

Gln Gly Leu Leu Ser Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu
                165                 170                 175

Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala
            180                 185                 190
```

```
Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg
        195                 200                 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr
    210                 215                 220

His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu
225                 230                 235                 240

Tyr Val Asn Gly Phe Thr His Gln Ser Ser Met Thr Thr Thr Arg Thr
                245                 250                 255

Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg Thr Pro Ala Ser
            260                 265                 270

Leu Ser Gly Pro Thr Thr Ala Ser Pro Leu Leu Ile Pro Phe
        275                 280                 285


<210>  75
<211>  286
<212>  PRT
<213>  Homo sapiens

<400>  75

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser
1               5                   10                  15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
            20                  25                  30

Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu
        35                  40                  45

Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp
65                  70                  75                  80

Arg Gly Ser Leu Tyr Val Asn Gly Phe Ser Arg Gln Ser Ser Met Thr
                85                  90                  95

Thr Thr Arg Thr Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg
            100                 105                 110

Thr Pro Ala Ser Leu Ser Gly Pro Thr Thr Ala Ser Pro Leu Leu Ile
        115                 120                 125
```

```
Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn
    130                 135                 140

Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu
145                 150                 155                 160

Gln Gly Leu Leu Asn Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu
                165                 170                 175

Tyr Ser Gly Cys Arg Leu Thr Ser Leu Lys Pro Glu Lys Asp Gly Ala
            180                 185                 190

Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg
        195                 200                 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr
    210                 215                 220

His Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu
225                 230                 235                 240

Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Ala Pro Thr Ser Thr
                245                 250                 255

Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Ser
            260                 265                 270

Leu Pro Ser Pro Thr Thr Ala Val Pro Leu Leu Ile Pro Phe
        275                 280                 285


<210>  76
<211>  286
<212>  PRT
<213>  Homo sapiens

<400>  76

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser
1               5                   10                  15

Leu Glu Tyr Leu Tyr Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu
            20                  25                  30

Lys Asp Ser Ser Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro
        35                  40                  45

Asp Pro Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu
    50                  55                  60
```

```
Ser Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp
65                  70                  75                  80

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Gly Leu
                85                  90                  95

Thr Thr Ser Thr Pro Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly
            100                 105                 110

Thr Pro Ser Pro Val Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Ile
        115                 120                 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn
    130                 135                 140

Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu
145                 150                 155                 160

Gln Gly Leu Leu Met Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu
                165                 170                 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala
            180                 185                 190

Ala Thr Arg Val Asp Ala Val Cys Thr Gln Arg Pro Asp Pro Lys Ser
        195                 200                 205

Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Lys Leu Ser Gln Leu Thr
    210                 215                 220

His Gly Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg His Ser Leu
225                 230                 235                 240

Tyr Val Asn Gly Leu Thr His Gln Ser Ser Met Thr Thr Thr Arg Thr
                245                 250                 255

Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg Thr Pro Ala Ser
            260                 265                 270

Leu Ser Gly Pro Thr Thr Ala Ser Pro Leu Leu Ile Pro Phe
        275                 280                 285


<210>  77
<211>  288
<212>  PRT
<213>  Homo sapiens

<400>  77
```

```
Glu Arg Val Leu Gln Gly Leu Leu Ser Pro Ile Ser Lys Asn Ser Ser
1               5                  10                  15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu
            20                  25                  30

Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro
        35                  40                  45

Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp
65                  70                  75                  80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro
                85                  90                  95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly
            100                 105                 110

Thr Pro Ser Ser Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile
        115                 120                 125

Pro Phe Thr Val Asn Phe Thr Ile Thr Asn Leu Arg Tyr Glu Glu Asn
    130                 135                 140

Met His His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu
145                 150                 155                 160

Gln Gly Leu Leu Arg Pro Val Phe Lys Asn Thr Ser Val Gly Pro Leu
                165                 170                 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala
            180                 185                 190

Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro Asp Pro Lys Ser
        195                 200                 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr
    210                 215                 220

Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu
225                 230                 235                 240

Tyr Val Asn Gly Phe Thr His Gln Ser Ser Val Ser Thr Thr Ser Thr
                245                 250                 255
```

```
Pro Gly Thr Ser Thr Val Asp Leu Arg Thr Ser Gly Thr Pro Ser Ser
            260                 265                 270

Leu Ser Ser Pro Thr Ile Met Ala Ala Gly Pro Leu Leu Ile Pro Phe
        275                 280                 285
```

<210> 78
<211> 597
<212> PRT
<213> Homo sapiens

<400> 78

```
Glu Arg Val Leu His Gly Leu Leu Thr Pro Leu Phe Lys Asn Thr Arg
1               5                   10                  15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
            20                  25                  30

Lys Gln Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Val
        35                  40                  45

Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu
    50                  55                  60

Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp
65                  70                  75                  80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Trp Ser Ser Val Pro
                85                  90                  95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser Gly
            100                 105                 110

Thr Pro Ser Ser Leu Pro Gly His Thr Ala Pro Val Pro Leu Leu Ile
        115                 120                 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu His Tyr Glu Glu Asn
    130                 135                 140

Met Gln His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu
145                 150                 155                 160

Gln Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu
                165                 170                 175

Tyr Ser Gly Cys Arg Leu Thr Leu Phe Lys Pro Glu Lys His Glu Ala
            180                 185                 190
```

```
Ala Thr Gly Val Asp Ala Ile Cys Thr Leu Arg Leu Asp Pro Thr Gly
        195                 200                 205

Pro Gly Leu Asp Arg Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn
    210                 215                 220

Ser Val Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr
225                 230                 235                 240

Val Asn Gly Phe Thr His Arg Ser Ser Val Pro Thr Thr Ser Ile Pro
                245                 250                 255

Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly Thr Pro Ala Ser Leu
            260                 265                 270

Pro Gly His Thr Ala Pro Gly Pro Leu Leu Ile Pro Phe Thr Leu Asn
        275                 280                 285

Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr Gly
    290                 295                 300

Ser Arg Lys Phe Asn Thr Met Glu Arg Val Leu Gln Gly Leu Leu Lys
305                 310                 315                 320

Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg
                325                 330                 335

Leu Thr Leu Leu Arg Pro Glu Lys Arg Gly Ala Ala Thr Gly Val Asp
            340                 345                 350

Thr Ile Cys Thr His Arg Leu Asp Pro Leu Asn Pro Gly Leu Asp Arg
        355                 360                 365

Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr Arg Gly Ile Ile Glu
    370                 375                 380

Leu Gly Pro Tyr Leu Leu Asp Arg Gly Ser Leu Tyr Val Asn Gly Phe
385                 390                 395                 400

Thr His Arg Asn Phe Val Pro Ile Thr Ser Thr Pro Gly Thr Ser Thr
                405                 410                 415

Val His Leu Gly Thr Ser Glu Thr Pro Ser Ser Leu Pro Arg Pro Ile
            420                 425                 430

Val Pro Gly Pro Leu Leu Ile Pro Phe Thr Ile Asn Phe Thr Ile Thr
```

435 440 445

Asn Leu Arg Tyr Glu Glu Asn Met His His Pro Gly Ser Arg Lys Phe
450 455 460

Asn Ile Met Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Leu Phe Lys
465 470 475 480

Asn Ser Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Ile Ser Leu
485 490 495

Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr
500 505 510

His His Leu Asn Pro Gln Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr
515 520 525

Trp Gln Leu Ser Gln Met Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr
530 535 540

Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser
545 550 555 560

Ser Gly Leu Thr Thr Ser Thr Pro Trp Thr Ser Thr Val Asp Leu Gly
565 570 575

Thr Ser Gly Thr Pro Ser Pro Val Pro Ser Pro Thr Thr Ala Gly Pro
580 585 590

Leu Leu Ile Pro Phe
595

<210> 79
<211> 420
<212> PRT
<213> Homo sapiens

<400> 79

Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys
1 5 10 15

Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn
20 25 30

Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser
35 40 45

Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp Arg

50 55 60

Asp Ser Leu Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro Thr
65 70 75 80

Thr Ser Thr Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly Thr
85 90 95

Pro Ser Ser Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile Pro
100 105 110

Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn Met
115 120 125

Gly His Pro Gly Ser Arg Lys Phe Asn Ile Thr Glu Ser Val Leu Gln
130 135 140

Gly Leu Leu Thr Pro Leu Phe Lys Asn Ser Ser Val Gly Pro Leu Tyr
145 150 155 160

Ser Gly Cys Arg Leu Ile Ser Leu Arg Ser Glu Lys Asp Gly Ala Ala
165 170 175

Thr Gly Val Asp Ala Ile Cys Thr His His Leu Asn Pro Gln Ser Pro
180 185 190

Gly Leu Asp Arg Glu Gln Leu Tyr Trp Gln Leu Ser Gln Met Thr Asn
195 200 205

Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr
210 215 220

Val Asn Gly Phe Thr His Arg Ser Leu Gly Leu Thr Thr Ser Thr Pro
225 230 235 240

Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Pro Val
245 250 255

Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Ile Pro Phe Thr Leu Asn
260 265 270

Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn Met Gly His Pro Gly
275 280 285

Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu Gln Gly Leu Leu Arg
290 295 300

Pro Val Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg
305 310 315 320

Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala Ala Thr Lys Val Asp
325 330 335

Ala Ile Cys Thr Tyr Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg
340 345 350

Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu
355 360 365

Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe
370 375 380

Thr Gln Arg Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr Pro Thr
385 390 395 400

Val Asp Leu Gly Thr Ser Gly Thr Pro Val Ser Lys Pro Gly Pro Ser
405 410 415

Ala Ala Ser Pro
420

<210> 80
<211> 479
<212> PRT
<213> Homo sapiens

<400> 80

Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr Asn Asp Ile Glu Glu Leu
1 5 10 15

Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr
20 25 30

His Gln Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Ser Thr Val
35 40 45

Asp Leu Arg Thr Ser Gly Thr Pro Ser Ser Leu Ser Ser Pro Thr Ile
50 55 60

Met Ala Ala Gly Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile
65 70 75 80

Thr Asn Leu Gln Tyr Glu Glu Asn Met Gly His Pro Gly Ser Arg Lys
85 90 95

```
Phe Asn Ile Met Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe
            100                 105                 110

Lys Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu
        115                 120                 125

Leu Arg Pro Glu Lys Asn Gly Ala Ala Thr Gly Met Asp Ala Ile Cys
    130                 135                 140

Ser His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu
145                 150                 155                 160

Tyr Trp Glu Leu Ser Gln Leu Thr His Gly Ile Lys Glu Leu Gly Pro
                165                 170                 175

Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg
            180                 185                 190

Ser Ser Val Ala Pro Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu
        195                 200                 205

Gly Thr Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Thr Ala Val
    210                 215                 220

Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Lys
225                 230                 235                 240

Tyr Glu Glu Asp Met His Cys Pro Gly Ser Arg Lys Phe Asn Thr Thr
                245                 250                 255

Glu Arg Val Leu Gln Ser Leu Phe Gly Pro Met Phe Lys Asn Thr Ser
            260                 265                 270

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Ser Glu
        275                 280                 285

Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu
    290                 295                 300

Asp Pro Lys Ser Leu Gly Val Asp Arg Glu Gln Leu Tyr Trp Glu Leu
305                 310                 315                 320

Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp
                325                 330                 335

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln Thr Ser Ala Pro
            340                 345                 350
```

Asn Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly
355 360 365

Thr Pro Ser Ser Leu Pro Ser Pro Thr Ser Ala Gly Pro Leu Leu Val
370 375 380

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp
385 390 395 400

Met Arg Arg Thr Gly Ser Arg Lys Phe Asn Thr Met Glu Ser Val Leu
405 410 415

Gln Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu
420 425 430

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala
435 440 445

Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser
450 455 460

Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu
465 470 475

<210> 81
<211> 5465
<212> DNA
<213> Homo sapiens

<400> 81
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ggttgacaag aactgatggc attatggaac acatcacaaa aatacccaat gaagcagcac 120

acagaggtac cataagacca gtcaaaggcc ctcagacatc cacttcgcct gccagtccta 180

aaggactaca cacaggaggg acaaaaagaa tggagaccac caccacagct ttgaagacca 240

ccaccacagc tttgaagacc acttccagag ccaccttgac caccagtgtc tatactccca 300

ctttgggaac actgactccc ctcaatgcat caaggcaaat ggccagcaca atcctcacag 360

aaatgatgat cacaacccca tatgttttcc ctgatgttcc agaaacgaca tcctcattgg 420

ctaccagcct gggagcagaa accagcacag ctcttcccag gacaacccca tctgttctca 480

atagagaatc agagaccaca gcctcactgg tctctcgttc tggggcagag agaagtccgg 540

ttattcaaac tctagatgtt tcttctagtg agccagatac aacagcttca tgggttatcc 600

atcctgcaga gaccatccca actgtttcca agacaacccc caatttttc cacagtgaat 660

tagacactgt atcttccaca gccaccagtc atggggcaga cgtcagctca gccattccaa 720

caaatatctc acctagtgaa ctagatgcac tgaccccact ggtcactatt tcggggacag 780

atactagtac aacattccca acactgacta agtccccaca tgaaacagag acaagaacca 840

catggctcac tcatcctgca gagaccagct caactattcc cagaacaatc cccaattttt 900

ctcatcatga atcagatgcc acaccttcaa tagccaccag tcctggggca gaaaccagtt 960

cagctattcc aattatgact gtctcacctg gtgcagaaga tctggtgacc tcacaggtca 1020

ctagttctgg gacagacaga aatatgacta ttccaacttt gactctttct cctggtgaac 1080

caaagacgat agcctcatta gtcacccatc ctgaagcaca gacaagttcg gccattccaa 1140

cttcaactat ctcgcctgct gtatcacggt tggtgacctc aatggtcacc agtttggcgg 1200

caaagacaag tacaactaat cgagctctga caaactcccc tggtgaacca gctacaacag 1260

tttcattggt cacgcatcct gcacagacca gcccaacagt tccctggaca acttccattt 1320

ttttccatag taaatcagac accacacctt caatgaccac cagtcatggg gcagaatcca 1380

gttcagctgt tccaactcca actgtttcaa ctgaggtacc aggagtagtg acccctttgg 1440

tcaccagttc tagggcagtg atcagtacaa ctattccaat tctgactctt tctcctggtg 1500

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caactccaac tgtttcacct ggggtaccag gagtggtgac ctctctggtc actagttcta 1620

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Lys Ile Pro Asn Glu Ala Ala His Arg Gly Thr Ile Arg Pro Val Lys
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Gly Pro Gln Thr Ser Thr Ser Pro Ala Ser Pro Lys Gly Leu His Thr
50 55 60

Gly Gly Thr Lys Arg Met Glu Thr Thr Thr Thr Ala Leu Lys Thr Thr
65 70 75 80

Thr Thr Ala Leu Lys Thr Thr Ser Arg Ala Thr Leu Thr Thr Ser Val

85 90 95

Tyr Thr Pro Thr Leu Gly Thr Leu Thr Pro Leu Asn Ala Ser Arg Gln
100 105 110

Met Ala Ser Thr Ile Leu Thr Glu Met Met Ile Thr Thr Pro Tyr Val
115 120 125

Phe Pro Asp Val Pro Glu Thr Thr Ser Ser Leu Ala Thr Ser Leu Gly
130 135 140

Ala Glu Thr Ser Thr Ala Leu Pro Arg Thr Thr Pro Ser Val Leu Asn
145 150 155 160

Arg Glu Ser Glu Thr Thr Ala Ser Leu Val Ser Arg Ser Gly Ala Glu
165 170 175

Arg Ser Pro Val Ile Gln Thr Leu Asp Val Ser Ser Ser Glu Pro Asp
180 185 190

Thr Thr Ala Ser Trp Val Ile His Pro Ala Glu Thr Ile Pro Thr Val
195 200 205

Ser Lys Thr Thr Pro Asn Phe Phe His Ser Glu Leu Asp Thr Val Ser
210 215 220

Ser Thr Ala Thr Ser His Gly Ala Asp Val Ser Ser Ala Ile Pro Thr
225 230 235 240

Asn Ile Ser Pro Ser Glu Leu Asp Ala Leu Thr Pro Leu Val Thr Ile
245 250 255

Ser Gly Thr Asp Thr Ser Thr Thr Phe Pro Thr Leu Thr Lys Ser Pro
260 265 270

His Glu Thr Glu Thr Arg Thr Thr Trp Leu Thr His Pro Ala Glu Thr
275 280 285

Ser Ser Thr Ile Pro Arg Thr Ile Pro Asn Phe Ser His His Glu Ser
290 295 300

Asp Ala Thr Pro Ser Ile Ala Thr Ser Pro Gly Ala Glu Thr Ser Ser
305 310 315 320

Ala Ile Pro Ile Met Thr Val Ser Pro Gly Ala Glu Asp Leu Val Thr
325 330 335

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Ser Gln Val Thr Ser Ser Gly Thr Asp Arg Asn Met Thr Ile Pro Thr
            340                 345                 350

Leu Thr Leu Ser Pro Gly Glu Pro Lys Thr Ile Ala Ser Leu Val Thr
        355                 360                 365

His Pro Glu Ala Gln Thr Ser Ser Ala Ile Pro Thr Ser Thr Ile Ser
    370                 375                 380

Pro Ala Val Ser Arg Leu Val Thr Ser Met Val Thr Ser Leu Ala Ala
385                 390                 395                 400

Lys Thr Ser Thr Thr Asn Arg Ala Leu Thr Asn Ser Pro Gly Glu Pro
                405                 410                 415

Ala Thr Thr Val Ser Leu Val Thr His Pro Ala Gln Thr Ser Pro Thr
            420                 425                 430

Val Pro Trp Thr Thr Ser Ile Phe Phe His Ser Lys Ser Asp Thr Thr
        435                 440                 445

Pro Ser Met Thr Thr Ser His Gly Ala Glu Ser Ser Ser Ala Val Pro
    450                 455                 460

Thr Pro Thr Val Ser Thr Glu Val Pro Gly Val Val Thr Pro Leu Val
465                 470                 475                 480

Thr Ser Ser Arg Ala Val Ile Ser Thr Thr Ile Pro Ile Leu Thr Leu
                485                 490                 495

Ser Pro Gly Glu Pro Glu Thr Thr Pro Ser Met Ala Thr Ser His Gly
            500                 505                 510

Glu Glu Ala Ser Ser Ala Ile Pro Thr Pro Thr Val Ser Pro Gly Val
        515                 520                 525

Pro Gly Val Val Thr Ser Leu Val Thr Ser Ser Arg Ala Val Thr Ser
    530                 535                 540

Thr Thr Ile Pro Ile Leu Thr Phe Ser Leu Gly Glu Pro Glu Thr Thr
545                 550                 555                 560

Pro Ser Met Ala Thr Ser His Gly Thr Glu Ala Gly Ser Ala Val Pro
                565                 570                 575

Thr Val Leu Pro Glu Val Pro Gly Met Val Thr Ser Leu Val Ala Ser
            580                 585                 590
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Ser Arg Ala Val Thr Ser Thr Thr Leu Pro Thr Leu Thr Leu Ser Pro
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Gly Glu Pro Glu Thr Thr Pro Ser Met Ala Thr Ser His Gly Ala Glu
    610                 615                 620

Ala Ser Ser Thr Val Pro Thr Val Ser Pro Glu Val Pro Gly Val Val
625                 630                 635                 640

Thr Ser Leu Val Thr Ser Ser Ser Gly Val Asn Ser Thr Ser Ile Pro
                645                 650                 655

Thr Leu Ile Leu Ser Pro Gly Glu Leu Glu Thr Thr Pro Ser Met Ala
            660                 665                 670

Thr Ser His Gly Ala Glu Ala Ser Ser Ala Val Pro Thr Pro Thr Val
        675                 680                 685

Ser Pro Gly Val Ser Gly Val Val Thr Pro Leu Val Thr Ser Ser Arg
    690                 695                 700

Ala Val Thr Ser Thr Thr Ile Pro Ile Leu Thr Leu Ser Ser Ser Glu
705                 710                 715                 720

Pro Glu Thr Thr Pro Ser Met Ala Thr Ser His Gly Val Glu Ala Ser
                725                 730                 735

Ser Ala Val Leu Thr Val Ser Pro Glu Val Pro Gly Met Val Thr Ser
            740                 745                 750

Leu Val Thr Ser Ser Arg Ala Val Thr Ser Thr Thr Ile Pro Thr Leu
        755                 760                 765

Thr Ile Ser Ser Asp Glu Pro Glu Thr Thr Thr Ser Leu Val Thr His
    770                 775                 780

Ser Glu Ala Lys Met Ile Ser Ala Ile Pro Thr Leu Ala Val Ser Pro
785                 790                 795                 800

Thr Val Gln Gly Leu Val Thr Ser Leu Val Thr Ser Ser Gly Ser Glu
                805                 810                 815

Thr Ser Ala Phe Ser Asn Leu Thr Val Ala Ser Ser Gln Pro Glu Thr
            820                 825                 830

Ile Asp Ser Trp Val Ala His Pro Gly Thr Glu Ala Ser Ser Val Val
        835                 840                 845
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Pro Thr Leu Thr Val Ser Thr Gly Glu Pro Phe Thr Asn Ile Ser Leu
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Val Thr His Pro Ala Glu Ser Ser Ser Thr Leu Pro Arg Thr Thr Ser
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Arg Phe Ser His Ser Glu Leu Asp Thr Met Pro Ser Thr Val Thr Ser
                885                 890                 895

Pro Glu Ala Glu Ser Ser Ser Ala Ile Ser Thr Thr Ile Ser Pro Gly
            900                 905                 910

Ile Pro Gly Val Leu Thr Ser Leu Val Thr Ser Ser Gly Arg Asp Ile
        915                 920                 925

Ser Ala Thr Phe Pro Thr Val Pro Glu Ser Pro His Glu Ser Glu Ala
    930                 935                 940

Thr Ala Ser Trp Val Thr His Pro Ala Val Thr Ser Thr Thr Val Pro
945                 950                 955                 960

Arg Thr Thr Pro Asn Tyr Ser His Ser Glu Pro Asp Thr Thr Pro Ser
                965                 970                 975

Ile Ala Thr Ser Pro Gly Ala Glu Ala Thr Ser Asp Phe Pro Thr Ile
            980                 985                 990

Thr Val Ser Pro Asp Val Pro Asp  Met Val Thr Ser Gln  Val Thr Ser
        995                 1000                1005

Ser Gly  Thr Asp Thr Ser Ile  Thr Ile Pro Thr Leu  Thr Leu Ser
    1010                1015                1020

Ser Gly  Glu Pro Glu Thr Thr  Thr Ser Phe Ile Thr  Tyr Ser Glu
    1025                1030                1035

Thr His  Thr Ser Ser Ala Ile  Pro Thr Leu Pro Val  Ser Pro Gly
    1040                1045                1050

Ala Ser  Lys Met Leu Thr Ser  Leu Val Ile Ser Ser  Gly Thr Asp
    1055                1060                1065

Ser Thr  Thr Thr Phe Pro Thr  Leu Thr Glu Thr Pro  Tyr Glu Pro
    1070                1075                1080

Glu Thr  Thr Ala Ile Gln Leu  Ile His Pro Ala Glu  Thr Asn Thr
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Met Val Pro Arg Thr Thr Pro Lys Phe Ser His Ser Lys Ser Asp
1100 1105 1110

Thr Thr Leu Pro Val Ala Ile Thr Ser Pro Gly Pro Glu Ala Ser
1115 1120 1125

Ser Ala Val Ser Thr Thr Thr Ile Ser Pro Asp Met Ser Asp Leu
1130 1135 1140

Val Thr Ser Leu Val Pro Ser Ser Gly Thr Asp Thr Ser Thr Thr
1145 1150 1155

Phe Pro Thr Leu Ser Glu Thr Pro Tyr Glu Pro Glu Thr Thr Ala
1160 1165 1170

Thr Trp Leu Thr His Pro Ala Glu Thr Ser Thr Thr Val Ser Gly
1175 1180 1185

Thr Ile Pro Asn Phe Ser His Arg Gly Ser Asp Thr Ala Pro Ser
1190 1195 1200

Met Val Thr Ser Pro Gly Val Asp Thr Arg Ser Gly Val Pro Thr
1205 1210 1215

Thr Thr Ile Pro Pro Ser Ile Pro Gly Val Val Thr Ser Gln Val
1220 1225 1230

Thr Ser Ser Ala Thr Asp Thr Ser Thr Ala Ile Pro Thr Leu Thr
1235 1240 1245

Pro Ser Pro Gly Glu Pro Glu Thr Thr Ala Ser Ser Ala Thr His
1250 1255 1260

Pro Gly Thr Gln Thr Gly Phe Thr Val Pro Ile Arg Thr Val Pro
1265 1270 1275

Ser Ser Glu Pro Asp Thr Met Ala Ser Trp Val Thr His Pro Pro
1280 1285 1290

Gln Thr Ser Thr Pro Val Ser Arg Thr Thr Ser Ser Phe Ser His
1295 1300 1305

Ser Ser Pro Asp Ala Thr Pro Val Met Ala Thr Ser Pro Arg Thr
1310 1315 1320

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Glu Ala  Ser Ser Ala Val Leu  Thr Thr Ile Ser Pro  Gly Ala Pro
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Glu Met  Val Thr Ser Gln Ile  Thr Ser Ser Gly Ala  Ala Thr Ser
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Thr Thr  Val Pro Thr Leu Thr  His Ser Pro Gly Met  Pro Glu Thr
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Thr Ala  Leu Leu Ser Thr His  Pro Arg Thr Glu Thr  Ser Lys Thr
    1370                 1375                 1380

Phe Pro  Ala Ser Thr Val Phe  Pro Gln Val Ser Glu  Thr Thr Ala
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Ser Leu  Thr Ile Arg Pro Gly  Ala Glu Thr Ser Thr  Ala Leu Pro
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Thr Gln  Thr Thr Ser Ser Leu  Phe Thr Leu Leu Val  Thr Gly Thr
    1415                 1420                 1425

Ser Arg  Val Asp Leu Ser Pro  Thr Ala Ser Pro Gly  Val Ser Ala
    1430                 1435                 1440

Lys Thr  Ala Pro Leu Ser Thr  His Pro Gly Thr Glu  Thr Ser Thr
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Met Ile  Pro Thr Ser Thr Leu  Ser Leu Gly Leu Leu  Glu Thr Thr
    1460                 1465                 1470

Gly Leu  Leu Ala Thr Ser Ser  Ser Ala Glu Thr Ser  Thr Ser Thr
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Leu Thr  Leu Thr Val Ser Pro  Ala Val Ser Gly Leu  Ser Ser Ala
    1490                 1495                 1500

Ser Ile  Thr Thr Asp Lys Pro  Gln Thr Val Thr Ser  Trp Asn Thr
    1505                 1510                 1515

Glu Thr  Ser Pro Ser Val Thr  Ser Val Gly Pro Pro  Glu Phe Ser
    1520                 1525                 1530

Arg Thr  Val Thr Gly Thr Thr  Met Thr Leu Ile Pro  Ser Glu Met
    1535                 1540                 1545

Pro Thr  Pro Pro Lys Thr Ser  His Gly Glu Gly Val  Ser Pro Thr
    1550                 1555                 1560
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Thr Ile  Leu Arg Thr Thr Met  Val Glu Ala Thr Asn  Leu Ala Thr
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Thr Leu  Ala Gly Ser Leu Phe  Thr Pro Leu Thr Thr  Pro Gly Met
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Ser Thr  Leu Ala Ser Glu Ser  Val Thr Ser Arg Thr  Ser Tyr Asn
    1610                 1615                 1620

His Arg  Ser Trp Ile Ser Thr  Thr Ser Ser Tyr Asn  Arg Arg Tyr
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Trp Thr  Pro Ala Thr Ser Thr  Pro Val Thr Ser Thr  Phe Ser Pro
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Gly Ile  Ser Thr Ser Ser Ile  Pro Ser Ser Thr Ala  Ala Thr Val
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Pro Phe  Met Val Pro Phe Thr  Leu Asn Phe Thr Ile  Thr Asn Leu
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Gln Tyr  Glu Glu Asp Met Arg  His Pro Gly Ser Arg  Lys Phe Asn
    1685                 1690                 1695

Ala Thr  Glu Arg Glu Leu Gln  Gly Leu Leu Lys Pro  Leu Phe Arg
    1700                 1705                 1710

Asn Ser  Ser Leu Glu Tyr Leu  Tyr Ser Gly Cys Arg  Leu Ala Ser
    1715                 1720                 1725

Leu Arg  Pro Glu Lys Asp Ser  Ser Ala Met Ala Val  Asp Ala Ile
    1730                 1735                 1740

Cys Thr  His Arg Pro Asp Pro  Glu Asp Leu Gly Leu  Asp Arg Glu
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Arg Leu  Tyr Trp Glu Leu Ser  Asn Leu Thr Asn Gly  Ile Gln Glu
    1760                 1765                 1770

Leu Gly  Pro Tyr Thr Leu Asp  Arg Asn Ser Leu Tyr  Val Asn Gly
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Phe Thr  His Arg Ser Ser Met  Pro Thr Thr Ser Thr  Pro Gly Thr
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Ser Pro Thr
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caccacctta accctcaaag ccctggactg gacagggagc agctgtactg gcagctgagc 300

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<212> DNA
<213> Homo sapiens

<400> 91
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ggtctgctta gtcccatttt caagaactcc agtgttggcc ctctgtactc tggctgcaga 180

ctgacctctc tcaggcccga gaaggatggg gcagcaactg gaatggatgc tgtctgcctc 240

taccacccta atcccaaaag acctggactg gacagagagc agctgtactg ggagctaagc 300

cagctgaccc acaacatcac tgagctgggc ccctacagcc tggacaggga cagtctctat 360

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gtgtactggg caaccactgg gactccatcc tccttccccg gccacaca 468

<210> 92
<211> 468
<212> DNA
<213> Homo sapiens

<400> 92
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cagctgaccc acaacatcac tgagctgggc ccctacagcc tggacaggga cagtctctat 360

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<211> 468
<212> DNA
<213> Homo sapiens

<400> 93

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caccgcgttg atcccatcgg acctggactg gacagggagc ggctatactg ggagctgagc 300

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<210> 94
<211> 468
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(468)
<223> All N's = any nucleotide

<400> 94
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caccgcgttg atcccatcgg acctggactg nacagngagc ngctntactg ggagctnagc 300

canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360

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gtgnacntng gnacctcngg gactccatcc tccntccccn gccncaca 468

<210> 95
<211> 468
<212> DNA
<213> Homo sapiens

<400> 95
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ggtctgcttg gtcccatgtt caagaacacc agtgtcggcc ttctgtactc tggctgcaga 180

ctgaccttgc tcaggcctga gaagaatggg gcagccactg gaatggatgc catctgcagc 240

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gtggaccttg ggacctcagg gactccatcc tccctcccca gccccaca 468

<210> 96
<211> 468
<212> DNA
<213> Homo sapiens

<400> 96
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ggtctgcttg gtcccttgtt caagaactcc agtgtcggcc ctctgtactc tggctgcaga 180

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gttgaccttg gaacctcagg gactccatcc cccgtcccca gccccaca 468

<210> 97
<211> 468
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<213> Homo sapiens

<400> 97
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ggtctgctta gtcccatatt caagaactcc agtgttggcc ctctgtactc tggctgcaga 180

ctgacctctc tcaggcccga gaaggatggg gcagcaactg gaatggatgc tgtctgcctc 240

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atgcacctgg caacctcgag aactccagcc tccctgtctg gacctacg 468

<210> 98
<211> 474
<212> DNA
<213> Homo sapiens

<400> 98
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ggtctgctca agcccttgtt caagaacacc agtgttggcc ctctgtactc tggctgcaga 180

ttgaccttgc tcaggcccaa gaaagatggg gcagccactg gagtggatgc catctgcacc 240

caccgccttg accccaaaag ccctggactc aacagggagc agctgtactg ggagctaagc 300

aaactgacca atgacattga agagctgggc ccctacaccc tggacaggaa cagtctctat 360

gtcaatggtt tcacccatca gagctctgtg tccaccacca gcactcctgg gacctccaca 420

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<210> 99
<211> 468
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(468)
<223> All N's = any nucleotide

<400> 99
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ggtctgctca ggcccttgtt caagaacacc agtgtcagct ctctgtactc tggttgcaga 180

ctgaccttgc tcaggcctga gaaggatggg gcagccacca gagtggatgc tgcctgcacc 240

taccgccctg atcccaaaag ccctggactg gacagagagc aactatactg ggagctgagc 300

cagctaaccc acagcatcac tgagctggga ccctacaccc tggacagggt cagtctctat 360

gtcaatggct tcaaccctcg gagctctgtg ccaaccacca gcactcctgg gacctccaca 420

gtgcacctgg caacctctgg gactccatcc tccctgcctg gccacaca 468

<210> 100
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<213> Homo sapiens

<400> 100
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gtgcacctgg aaacctctgg gactccagcc tccctccctg gccacaca 468

<210> 101
<211> 468
<212> DNA
<213> Homo sapiens

<400> 101
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ggtctgctca agcccttgtt caagagcacc agtgttggcc ctctgtactc tggctgcaga 180

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caccgccttg accctctaaa ccctggactg gacagagagc agctatactg ggagctgagc 300

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gtcaatggtt tcacccatcg gaactttgtg cccatcacca gcactcctgg gacctccaca 420

gtacacctag gaacctctga aactccatcc tccctaccta gacccata 468

<210> 102
<211> 468
<212> DNA
<213> Homo sapiens

<400> 102
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gaggaggcca tgcgacaccc tggctccagg aagttcaata ccacggagag ggtcctacag 120

ggtctgctca ggcccttgtt caagaatacc agtatcggcc ctctgtactc cagctgcaga 180

ctgaccttgc tcaggccaga gaaggacaag gcagccacca gagtggatgc catctgtacc 240

caccaccctg accctcaaag ccctggactg aacagagagc agctgtactg ggagctgagc 300

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<210> 103
<211> 468
<212> DNA
<213> Homo sapiens

<220>
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<222> (1)..(468)
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<400> 103
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gttgaccttg gaacctcagg gactccatcc cccgtcccca gccccaca 468

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<211> 468
<212> DNA
<213> Homo sapiens

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gtgcacctgg caacctctgg gactccatcc tccctgcctg gccacaca 468

<210> 105
<211> 468
<212> DNA
<213> Homo sapiens

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ggtctgctca agcccttgtt caagagcacc agcgttggcc ctctgtactc tggctgcaga 180

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ctccgccttg atcccactgg tcctggactg gacagagagc ggctatactg ggagctgagc 300

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gtgcacctgg aaacctctgg gactccagcc tccctccctg gccacaca 468

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<211> 468
<212> DNA
<213> Homo sapiens

<400> 106
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ggtctgctca agcccttgtt caagaacacc agtgtcagct ctctgtactc tggttgcaga 180

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cagctgaccc acggcatcac tgagctgggc ccctacaccc tggacaggca cagtctctat 360

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<211> 468
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<213> Homo sapiens

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ctgaccacgc tcaggcccaa gaaggatggg gcagccacca aagtggatgc catctgcacc 240

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gtgcacctgg aaacctctgg gactccagcc tccctccctg gccacaca 468

<210> 108
<211> 468
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<213> Homo sapiens

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gtggaccttg gaacctcagg gactccattc tccctcccaa gccccgca 468

<210> 109
<211> 465
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(465)
<223> All N's = any nucleotide

<400> 109
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gtggaccttg ggtcagggac tccatcctcc ctccccagcc ccaca 465

<210> 110
<211> 468
<212> DNA
<213> Homo sapiens

<400> 110
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<210> 111
<211> 465
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(465)

<223> All N's = any nucleotide

<400> 111
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<210> 112
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<212> DNA
<213> Homo sapiens

<220>
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<222> (1)..(468)
<223> All N's = any nucleotide

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gtgnacntng gnacctcngg gactccatcc tccntccccn gccncaca 468

<210> 113
<211> 468
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(468)
<223> All N's = any nucleotide

<400> 113
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ggtctgcttg gtcccatgtt caagaacacc agtgtcggcc ttctgtactc tggctgcaga 180

ctgaccttgc tcaggcctga gaagaatggg gcaaccactg gaatggatgc catctgcacc 240

caccgtcttg accccaaaag ccctggactg nacagngagc ngctntactg ggagctnagc 300

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<210> 114
<211> 468
<212> DNA
<213> Homo sapiens

<220>
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<222> (1)..(468)
<223> All N's = any nucleotide

<400> 114
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catcgccctg accctgaaga cctcggactg gacagagagc gactgtactg ggagctgagc 300

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gtcaatggtt tcacccatcg aagctctatg cccaccacca gcactcctgg gacctccaca 420

gtggatgtgg gaacctcagg gactccatcc tccagcccca gccccacg 468

<210> 115
<211> 468
<212> DNA
<213> Homo sapiens

<400> 115
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caactgacca atggcatcaa agagctgggc ccctacaccc tggacaggaa cagtctctat 360

gtcaatggtt tcacccatcg gacctctgtg cccaccacca gcactcctgg gacctccaca 420

gtggaccttg gaacctcagg gactccattc tccctcccaa gccccgca 468

<210> 116
<211> 468
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(468)
<223> All N's = any nucleotide

<400> 116
actgctggcc ctctcctggt gctgttcacc ctcaacttca ccatcaccaa cctgaagtat 60

gaggaggaca tgcatcgccc tggctccagg aagttcaaca ccactgagag ggtcctgcag 120

actctgcttg gtcctatgtt caagaacacc agtgttggcc ttctgtactc tggctgcaga 180

ctgaccttgc tcaggtccga gaaggatgga gcagccactg gagtggatgc catctgcacc 240

caccgtcttg accccaaaag ccctggactg nacagngagc ngctntactg ggagctnagc 300

canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360

gtcaatggtt tcacccatcn ganctctgng cccaccacca gcactcctgg gacctccaca 420

gtgnacntng gnacctcngg gactccatcc tccntccccn gccncaca 468

<210> 117
<211> 468
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(468)
<223> All N's = any nucleotide

<400> 117
ncnnctgncc ctctcctgnt nccnttcacc ntcaacttna ccatcaccaa cctgcantan 60

gnggannaca tgcnncnccc nggntccagg aagttcaaca ccacngagag agtccttcag 120

ggtctgctca ggcctgtgtt caagaacacc agtgttggcc ctctgtactc tggctgcaga 180

ctgaccttgc tcaggcccaa gaaggatggg gcagccacca aagtggatgc catctgcacc 240

taccgccctg atcccaaaag ccctggactg gacagagagc agctatactg ggagctgagc 300

cagctaaccc acagcatcac tgagctgggc ccctacaccc aggacaggga cagtctctat 360

gtcaatggct tcacccatcg gagctctgtg ccaaccacca gtattcctgg gacctctgca 420

gtgcacctgg aaaccactgg gactccatcc tccttccccg gccacaca 468

<210> 118

<211> 468
<212> DNA
<213> Homo sapiens

<400> 118
gagcctggcc ctctcctgat accattcact ttcaacttta ccatcaccaa cctgcgttat 60

gaggaaaaca tgcaacaccc tggttccagg aagttcaaca ccacggagag ggttctgcag 120

ggtctgctca cgcccttgtt caagaacacc agtgttggcc ctctgtactc tggctgcaga 180

ctgaccttgc tcagacctga gaagcaggag gcagccactg gagtggacac catctgtacc 240

caccgcgttg atcccatcgg acctggactg gacagagagc ggctatactg ggagctgagc 300

cagctgacca acagcatcac agagctggga ccctacaccc tggataggga cagtctctat 360

gtcgatggct tcaacccttg gagctctgtg ccaaccacca gcactcctgg gacctccaca 420

gtgcacctgg caacctctgg gactccatcc cccctgcctg gccacaca 468

<210> 119
<211> 468
<212> DNA
<213> Homo sapiens

<400> 119
gcccctgtcc ctctcttgat accattcacc ctcaacttta ccatcaccga cctgcattat 60

gaagaaaaca tgcaacaccc tggttccagg aagttcaaca ccacggagag ggttctgcag 120

ggtctgctca agcccttgtt caagagcacc agcgttggcc ctctgtactc tggctgcaga 180

ctgaccttgc tcagacctga gaaacatggg gcagccactg gagtggacgc catctgcacc 240

ctccgccttg atcccactgg tcctggactg gacagagagc ggctatactg ggagctgagc 300

cagctgacca acagcatcac agagctggga ccctacaccc tggataggga cagtctctat 360

gtcaatggct tcaacccttg gagctctgtg ccaaccacca gcactcctgg gacctccaca 420

gtgcacctgg caacctctgg gactccatcc tccctgcctg gccacaca 468

<210> 120
<211> 468
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(468)
<223> All N's = any nucleotide

<400> 120
actgctggcc ctctcctggt gccgttcacc ctcaacttca ccatcaccaa cctgaagtac 60

gaggaggaca tgcattgccc tggctccagg aagttcaaca ccacagagag agtcctgcag 120

agtctgcatg gtcccatgtt caagaacacc agtgttggcc ctctgtactc tggctgcaga 180

ctgaccttgc tcaggtccga gaaggatgga gcagccactg gagtggatgc catctgcacc 240

caccgtcttg accccaaaag ccctggactg nacagngagc ngctntactg ggagctnagc 300

canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360

gtcaatggtt tcacccatcn ganctctgng cccaccacca gcactcctgg gacctccaca 420

gtgnacntng gnacctcngg gactccatcc tccntccccn gccncaca 468

<210> 121
<211> 468
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(468)
<223> All N's = any nucleotide

<400> 121
ncnnctgncc ctctcctgnt nccnttcacc ntcaacttna ccatcaccaa cctgcantan 60

gnggannaca tgcnncnccc nggntccagg aagttcaaca ccacngagng ngtnctgcag 120

ggtctgctnn nncccntntt caagaacncc agtgtnggcc ntctgtactc tggctgcaga 180

ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc 240

caccnncntn ancccaaaag ncctggactg nacagngagc ngctntactg ggagctnagc 300

canctgacca acagcatcac agagctggga ccctacaccc tggataggga cagtctctat 360

gtcaatggtt tcacccatcg aagctctatg cccaccacca gtattcctgg gacctctgca 420

gtgcacctgg aaacctctgg gactccagcc tccctccctg gccacaca 468

<210> 122
<211> 468
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(468)
<223> All N's = any nucleotide

<400> 122
gcccctggcc ctctcctggt gccattcacc ctcaacttca ctatcaccaa cctgcagtat 60

gaggaggaca tgcgtcaccc tggttccagg aagttcaaca ccacggagag agtcctgcag 120

ggtctgctca agcccttgtt caagagcacc agtgttggcc ctctgtactc tggctgcaga 180

ctgaccttgc tcaggcctga aaaacgtggg gcagccaccg gcgtggacac catctgcact 240

caccgccttg accctctaaa ccctggactg nacagngagc ngctntactg ggagctnagc 300

canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360

gtcaatggtt tcacccatcn ganctctgng cccaccacca gcactcctgg gacctccaca 420

gtgnacntng gnacctcngg gactccatcc tccntccccn gccncaca 468

<210> 123
<211> 468
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(468)
<223> All N's = any nucleotide

<400> 123
ncnnctgncc ctctcctgnt nccnttcacc ntcaacttna ccatcaccaa cctgcantan 60

gnggannaca tgcnncnccc nggntccagg aagttcaaca ccacngagng ngtnctgcag 120

ggtctgctnn nncccntntt caagaacncc agtgtnggcc ntctgtactc tggctgcaga 180

ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc 240

caccnncntn ancccaaaag ncctggactg nacagngagc ngctntactg ggagctnagc 300

canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360

gtcaatggtt ttcaccctcg gagctctgtg ccaaccacca gcactcctgg gacctccaca 420

gtgcacctgg caacctctgg gactccatcc tccctgcctg gccacaca 468

<210> 124
<211> 468
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(468)
<223> All N's = any nucleotide

<400> 124
gcccctgtcc ctctcttgat accattcacc ctcaacttta ccatcaccaa cctgcattat 60

gaagaaaaca tgcaacaccc tggttccagg aagttcaaca ccacggagcg ggtcctgcag 120

ggtctgcttg gtcccatgtt caagaacaca agtgtcggcc ttctgtactc tggctgcaga 180

ctgaccttgc tcaggcctga gaagaatggg gcagccactg gaatggatgc catctgcagc 240

caccgtcttg accccaaaag ccctggactg nacagngagc ngctntactg ggagctnagc 300

canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360

gtcaatggtt tcacccatcn ganctctgng cccaccacca gcactcctgg gacctccaca 420

gtgnacntng gnacctcngg gactccatcc tccntccccn gccncaca 468

<210> 125
<211> 468
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(468)
<223> All N's = any nucleotide

<400> 125
ncnnctgncc ctctcctgnt nccnttcacc ntcaacttna ccatcaccaa cctgcantan 60

gnggannaca tgcnncnccc nggntccagg aagttcaaca ccacngagng ngtnctgcag 120

ggtctgctnn nncccntntt caagaacncc agtgtnggcc ntctgtactc tggctgcaga 180

ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc 240

caccnncntn ancccaaaag ncctggactg nacagngagc ngctntactg ggagctnagc 300

canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360

gtcaatggtt tcacccatca gaactctgtg cccaccacca gtactcctgg gacctccaca 420

gtgtactggg caaccactgg gactccatcc tccttccccg gccacaca 468

<210> 126
<211> 468
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(468)
<223> All N's = any nucleotide

<400> 126
gagcctggcc ctctcctgat accattcact ttcaacttta ccatcaccaa cctgcattat 60

gaggaaaaca tgcaacaccc tggttccagg aagttcaaca ccacggagag ggttctgcag 120

ggtctgctca cgcccttgtt caagaacacc agtgttggcc ctctgtactc tggctgcaga 180

ctgaccttgc tcagacctga gaagcaggag gcagccactg gagtggacac catctgtacc 240

caccgcgttg atcccatcgg acctggactg nacagngagc ngctntactg ggagctnagc 300

canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360

gtcaatggtt tcacccatcn ganctctgng cccaccacca gcactcctgg gacctccaca 420

gtgnacntng gnacctcngg gactccatcc tccntccccn gccncaca 468

<210> 127
<211> 468
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(468)
<223> All N's = any nucleotide

<400> 127
ncnnctgncc ctctcctgnt nccnttcacc ntcaacttna ccatcaccaa cctgcantan 60

gnggannaca tgcnncnccc nggntccagg aagttcaaca ccacngagng ngtnctgcag 120

ggtctgctnn nncccntntt caagaacncc agtgtnggcc ntctgtactc tggctgcaga 180

ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc 240

caccnncntn ancccaaaag ncctggactg nacagngagc ngctntactg ggagctnagc 300

canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360

gtcaatggtt tcacccatcg gagctctgtg ccaaccacca gcagtcctgg gacctccaca 420

gtgcacctgg caacctctgg gactccatcc tccctgcctg gccacaca 468

<210> 128
<211> 468
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(468)
<223> All N's = any nucleotide

<400> 128
gcccctgtcc ctctcttgat accattcacc ctcaacttta ccatcaccaa cctgcattat 60

gaagaaaaca tgcaacaccc tggttccagg aagttcaaca ccacggagag ggttctgcag 120

ggtctgctca agcccttgtt caagagcacc agtgttggcc ctctgtactc tggctgcaga 180

ctgaccttgc tcagacctga gaaacatggg gcagccactg gagtggacgc catctgcacc 240

ctccgccttg atcccactgg tcctggactg nacagngagc ngctntactg ggagctnagc 300

canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360

gtcaatggtt tcacccatcn ganctctgng cccaccacca gcactcctgg gacctccaca 420

gtgnacntng gnacctcngg gactccatcc tccntccccn gccncaca 468

<210> 129
<211> 468
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(468)

<223> All N's = any nucleotide

<400> 129
ncnnctgncc ctctcctgnt nccnttcacc ntcaacttna ccatcaccaa cctgcantan 60

gnggannaca tgcnncnccc nggntccagg aagttcaaca ccacngagng ngtnctgcag 120

ggtctgctnn nncccntntt caagaacncc agtgtnggcc ntctgtactc tggctgcaga 180

ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc 240

caccnncntn ancccaaaag ncctggactg nacagngagc ngctntactg ggagctnagc 300

canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360

gtcaatggtt tcacccatcg gacctctgtg cccaccacca gcactcctgg gacctccaca 420

gtgcacctgg caacctctgg gactccatcc tccctgcctg gccacaca 468

<210> 130
<211> 468
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(468)
<223> All N's = any nucleotide

<400> 130
gcccctgtcc ctctcttgat accattcacc ctcaacttta ccatcaccaa cctgcagtat 60

gaggaggaca tgcatcgccc tggatctagg aagttcaaca ccacagagag ggtcctgcag 120

ggtctgctta gtcccatttt caagaactcc agtgttggcc ctctgtactc tggctgcaga 180

ctgacctctc tcaggcccga gaaggatggg gcagcaactg gaatggatgc tgtctgcctc 240

taccacccta atcccaaaag acctggactg nacagngagc ngctntactg ggagctnagc 300

canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360

gtcaatggtt tcacccatcn ganctctgng cccaccacca gcactcctgg gacctccaca 420

gtgnacntng gnacctcngg gactccatcc tccntccccn gccncaca 468

<210> 131
<211> 468
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(468)
<223> All N's = any nucleotide

<400> 131
ncnnctgncc ctctcctgnt nccnttcacc ntcaacttna ccatcaccaa cctgcantan 60

gnggannaca tgcnncnccc nggntccagg aagttcaaca ccacngagng ngtnctgcag 120

ggtctgctnn nncccntntt caagaacncc agtgtnggcc ntctgtactc tggctgcaga 180

ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc 240

caccnncntn ancccaaaag ncctggactg nacagngagc ngctntactg ggagctnagc 300

canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360

gtcaatggtt tcacccattg gagctctggg ctcaccacca gcactccttg gacttccaca 420

gttgaccttg gaacctcagg gactccatcc cccgtcccca gccccaca 468

<210> 132
<211> 468
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(468)
<223> All N's = any nucleotide

<400> 132
actgctggcc ctctcctggt gccattcacc ctaaacttca ccatcaccaa cctgcagtat 60

gaggaggaca tgcatcgccc tggatctagg aagttcaacg ccacagagag ggtcctgcag 120

ggtctgctta gtcccatatt caagaacacc agtgttggcc ctctgtactc tggctgcaga 180

ctgaccttgc tcagacctga gaagcaggag gcagccactg gagtggacac catctgtacc 240

caccgcgttg atcccatcgg acctggactg nacagngagc ngctntactg ggagctnagc 300

canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360

gtcaatggtt tcacccatcn ganctctgng cccaccacca gcactcctgg gacctccaca 420

gtgnacntng gnacctcngg gactccatcc tccntccccn gccncaca 468

<210> 133
<211> 468
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(468)
<223> All N's = any nucleotide

<400> 133
ncnnctgncc ctctcctgnt nccnttcacc ntcaacttna ccatcaccaa cctgcantan 60

gnggannaca tgcnncnccc nggntccagg aagttcaaca ccacngagng ngtnctgcag 120

ggtctgctnn nncccntntt caagaacncc agtgtnggcc ntctgtactc tggctgcaga 180

ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc 240

caccnncntn ancccaaaag ncctggactg nacagngagc ngctntactg ggagctnagc 300

canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360

gtcaatggtt tcacccatcg gagctttggg ctcaccacca gcactccttg gacttccaca 420

gttgaccttg gaacctcagg gactccatcc cccgtcccca gccccaca 468

<210> 134
<211> 468
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(468)
<223> All N's = any nucleotide

<400> 134
actgctggcc ctctcctggt gccattcacc ctaaacttca ccatcaccaa cctgcagtat 60

gaggaggaca tgcatcgccc tggctccagg aagttcaaca ccacggagag ggtccttcag 120

ggtctgctta cgcccttgtt caggaacacc agtgtcagct ctctgtactc tggttgcaga 180

ctgaccttgc tcaggcctga gaaggatggg gcagccacca gagtggatgc tgtctgcacc 240

catcgtcctg accccaaaag ccctggactg nacagngagc ngctntactg ggagctnagc 300

canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360

gtcaatggtt tcacccatcn ganctctgng cccaccacca gcactcctgg gacctccaca 420

gtgnacntng gnacctcngg gactccatcc tccntccccn gccncaca 468

<210> 135
<211> 465
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(465)
<223> All N's = any nucleotide

<400> 135
ncnnctgncc ctctcctgnt nccnttcacc ntcaacttna ccatcaccaa cctgcantan 60

gnggannaca tgcnncnccc nggntccagg aagttcaaca ccacngagng ngtnctgcag 120

ggtctgctnn nncccntntt caagaacncc agtgtnggcc ntctgtactc tggctgcaga 180

ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc 240

caccnncntn ancccaaaag ncctggactg nacagngagc ngctntactg ggagctnagc 300

canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360

gtcaatggtt tcacccattg gatccctgtg cccaccagca gcactcctgg gacctccaca 420

gtggaccttg ggtcagggac tccatcctcc ctccccagcc ccaca 465

<210> 136
<211> 468
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(468)
<223> All N's = any nucleotide

<400> 136
actgctggcc ctctcctggt accattcacc ctcaacttca ccatcaccaa cctgcagtat 60

ggggaggaca tgggtcaccc tggctccagg aagttcaaca ccacagagag ggtcctgcag 120

ggtctgcttg gtcccatatt caagaacacc agtgttggcc ctctgtactc tggctgcaga 180

ctgacctctc tcaggtccga gaaggatgga gcagccactg gagtggatgc catctgcatc 240

catcatcttg accccaaaag ccctggactg nacagngagc ngctntactg ggagctnagc 300

canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360

gtcaatggtt tcacccatcn ganctctgng cccaccacca gcactcctgg gacctccaca 420

gtgnacntng gnacctcngg gactccatcc tccntccccn gccncaca 468

<210> 137
<211> 468
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(468)
<223> All N's = any nucleotide

<400> 137
ncnnctgncc ctctcctgnt nccnttcacc ntcaacttna ccatcaccaa cctgcantan 60

gnggannaca tgcnncnccc nggntccagg aagttcaaca ccacngagng ngtnctgcag 120

ggtctgctnn nncccntntt caagaacncc agtgtnggcc ntctgtactc tggctgcaga 180

ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc 240

caccnncntn ancccaaaag ncctggactg nacagngagc ngctntactg ggagctnagc 300

canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360

gtcaatggtt tcacccatca gacctttgcg cccaacacca gcactcctgg gacctccaca 420

gtggaccttg ggacctcagg gactccatcc tccctcccca gccctaca 468

<210> 138
<211> 468
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(468)
<223> All N's = any nucleotide

<400> 138
tctgctggcc ctctcctggt gccattcacc ctcaacttca ccatcaccaa cctgcagtac 60

gaggaggaca tgcatcaccc aggctccagg aagttcaaca ccacggagcg ggtcctgcag 120

ggtctgcttg gtcccatgtt caagaacacc agtgtcggcc ttctgtactc tggctgcaga 180

ctgaccttgc tcaggcctga gaagaatggg gcagccacca gagtggatgc tgtctgcacc 240

catcgtcctg accccaaaag ccctggactg nacagngagc ngctntactg ggagctnagc 300

canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360

gtcaatggtt tcacccatcn ganctctgng cccaccacca gcactcctgg gacctccaca 420

gtgnacntng gnacctcngg gactccatcc tccntccccn gccncaca 468

<210> 139
<211> 468
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(468)
<223> All N's = any nucleotide

<400> 139
ncnnctgncc ctctcctgnt nccnttcacc ntcaacttna ccatcaccaa cctgcantan 60

gnggannaca tgcnncnccc nggntccagg aagttcaaca ccacngagag ggttctgcag 120

ggtctgctca agcccttgtt caagagcacc agtgttggcc ctctgtattc tggctgcaga 180

ctgaccttgc tcaggcctga gaaggacgga gtagccacca gagtggacgc catctgcacc 240

caccgccctg accccaaaat ccctgggcta gacagacagc agctatactg ggagctgagc 300

cagctgaccc acagcatcac tgagctggga ccctacaccc tggataggga cagtctctat 360

gtcaatggtt tcacccagcg gagctctgtg cccaccacca gcactcctgg gactttcaca 420

gtacagccgg aaacctctga gactccatca tccctccctg gccccaca 468

<210> 140
<211> 468
<212> DNA
<213> Homo sapiens

<400> 140
gccactggcc ctgtcctgct gccattcacc ctcaatttta ccatcactaa cctgcagtat 60

gaggaggaca tgcatcgccc tggctccagg aagttcaaca ccacggagag ggtccttcag 120

ggtctgctta tgcccttgtt caagaacacc agtgtcagct ctctgtactc tggttgcaga 180

ctgaccttgc tcaggcctga gaaggatggg gcagccacca gagtggatgc tgtctgcacc 240

catcgtcctg accccaaaag ccctggactg gacagagagc ggctgtactg gaagctgagc 300

cagctgaccc acggcatcac tgagctgggc ccctacaccc tggacaggca cagtctctat 360

gtcaatggtt tcacccatca gagctctatg acgaccacca gaactcctga tacctccaca 420

atgcacctgg caacctcgag aactccagcc tccctgtctg gacctacg 468

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<211> 468
<212> DNA
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gaggagaaca tgcatcaccc tggctctaga aagtttaaca ccacggagag agtccttcag 120

ggtctgctca ggcctgtgtt caagaacacc agtgttggcc ctctgtactc tggctgcaga 180

ctgaccttgc tcaggcccaa gaaggatggg gcagccacca aagtggatgc catctgcacc 240

taccgccctg atcccaaaag ccctggactg gacagagagc agctatactg ggagctgagc 300

cagctaaccc acagcatcac tgagctgggc ccctacaccc tggacaggga cagtctctat 360

gtcaatggtt tcacacagcg gagctctgtg cccaccacta gcattcctgg gacccccaca 420

gtggacctgg gaacatctgg gactccagtt tctaaacctg gtccctcg 468

<210> 142
<211> 468
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<213> Homo sapiens

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gaggagaaca tgcagcaccc tggctccagg aagttcaaca ccacggagag ggtccttcag 120

ggcctgctca ggtccctgtt caagagcacc agtgttggcc ctctgtactc tggctgcaga 180

ctgactttgc tcaggcctga aaaggatggg acagccactg gagtggatgc catctgcacc 240

caccaccctg accccaaaag ccctaggctg gacagagagc agctgtattg ggagctgagc 300

cagctgaccc acaatatcac tgagctgggc cactatgccc tggacaacga cagcctcttt 360

gtcaatggtt tcactcatcg gagctctgtg tccaccacca gcactcctgg gacccccaca 420

gtgtatctgg gagcatctaa gactccagcc tcgatatttg gcccttca 468

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ctgctaaggc ccttgttcaa gaacaccagt gttggccctc tgtactctgg ctccaggctg 180

accttgctca ggccagagaa agatggggaa gccaccggag tggatgccat ctgcacccac 240

cgccctgacc ccacaggccc tgggctggac agagagcagc tgtatttgga gctgagccag 300

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aatggtttca cccatcggag ctctgtaccc accaccagc 399

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<211> 453
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atggcggaca tgggccaacc cggctccctc aagttcaaca tcacagacaa cgtcatgaag 120

cacctgctca gtcctttgtt ccagaggagc agcctgggtg cacggtacac aggctgcagg 180

gtcatcgcac taaggtctgt gaagaacggt gctgagacac gggtggacct cctctgcacc 240

tacctgcagc ccctcagcgg cccaggtctg cctatcaagc aggtgttcca tgagctgagc 300

cagcagaccc atggcatcac ccggctgggc ccctactctc tggacaaaga cagcctctac 360

cttaacggtt acaatgaacc tggtctagat gagcctccta caactcccaa gccagccacc 420

acattcctgc ctcctctgtc agaagccaca aca 453

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<212> DNA
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ctgctcagac ccttgttcca gaagagcagc atgggcccct tctacttggg ttgccaactg 180

atctccctca ggcctgagaa ggatggggca gccactggtg tggacaccac ctgcacctac 240

caccctgacc ctgtgggccc cgggctggac atacagcagc tttactggga gctgagtcag 300

ctgacccatg gtgtcaccca actgggcttc tatgtcctgg acagggatag cctcttcatc 360

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gtcaactgga acctcagtaa tccagacccc acatcctcag agtac 465

<210> 146
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Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe
20 25 30

Asn Ala Thr Glu Arg Glu Leu Gln Gly Leu Leu Lys Pro Leu Phe Arg
35 40 45

Asn Ser Ser Leu Glu Tyr Leu Tyr Ser Gly Cys Arg Leu Ala Ser Leu
50 55 60

Arg Pro Glu Lys Asp Ser Ser Ala Met Ala Val Asp Ala Ile Cys Thr
65 70 75 80

His Arg Pro Asp Pro Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr
85 90 95

Trp Glu Leu Ser Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr
100 105 110

Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser
115 120 125

Ser Met Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Val Gly
130 135 140

Thr Ser Gly Thr Pro Ser Ser Ser Pro Ser Pro Thr Ala Ala Gly Pro
145 150 155 160

Leu Leu Met Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr
165 170 175

Glu Glu Asp Met Arg Arg Thr Gly Ser Arg Lys Phe Asn Thr Met Glu

180 185 190

Ser Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr Ser Val
195 200 205

Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys
210 215 220

Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu Asp
225 230 235 240

Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu Ser
245 250 255

Lys Leu Thr Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr Leu Asp Arg
260 265 270

Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln Ser Ser Val Ser Thr
275 280 285

Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Arg Thr Ser Gly Thr
290 295 300

Pro Ser Ser Leu Ser Ser Pro Thr Ile Met Ala Ala Gly Pro Leu Leu
305 310 315 320

Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Gly Glu
325 330 335

Asp Met Gly His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val
340 345 350

Leu Gln Gly Leu Leu Gly Pro Ile Phe Lys Asn Thr Ser Val Gly Pro
355 360 365

Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Ser Glu Lys Asp Gly
370 375 380

Ala Ala Thr Gly Val Asp Ala Ile Cys Ile His His Leu Asp Pro Lys
385 390 395 400

Ser Pro Gly Leu Asn Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu
405 410 415

Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser
420 425 430

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Leu Tyr Val Asn Gly Phe Thr His Arg Thr Ser Val Pro Thr Ser Ser
        435                 440                 445

Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Phe
    450                 455                 460

Ser Leu Pro Ser Pro Ala Thr Ala Gly Pro Leu Leu Val Leu Phe Thr
465                 470                 475                 480

Leu Asn Phe Thr Ile Thr Asn Leu Lys Tyr Glu Glu Asp Met His Arg
                485                 490                 495

Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Thr Leu
            500                 505                 510

Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly
        515                 520                 525

Cys Arg Leu Thr Leu Leu Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly
    530                 535                 540

Val Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly Leu
545                 550                 555                 560

Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Gly Ile
                565                 570                 575

Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn
            580                 585                 590

Gly Phe Thr His Trp Ile Pro Val Pro Thr Ser Ser Thr Pro Gly Thr
        595                 600                 605

Ser Thr Val Asp Leu Gly Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro
    610                 615                 620

Thr Ala Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile
625                 630                 635                 640

Thr Asn Leu Gln Tyr Glu Glu Asp Met His His Pro Gly Ser Arg Lys
                645                 650                 655

Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe
            660                 665                 670

Lys Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu
        675                 680                 685
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Leu Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys
    690                 695                 700

Thr His Arg Leu Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln Leu
705                 710                 715                 720

Tyr Trp Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro
                725                 730                 735

Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln
            740                 745                 750

Thr Ser Ala Pro Asn Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu
        755                 760                 765

Gly Thr Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Ser Ala Gly
    770                 775                 780

Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln
785                 790                 795                 800

Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr Thr
                805                 810                 815

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser
            820                 825                 830

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Ser Glu
        835                 840                 845

Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu
    850                 855                 860

Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp Glu Leu
865                 870                 875                 880

Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp
                885                 890                 895

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln Thr Ser Ala Pro
            900                 905                 910

Asn Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly
        915                 920                 925

Thr Pro Ser Ser Leu Pro Ser Pro Thr Ser Ala Gly Pro Leu Leu Val
    930                 935                 940
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Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp
945                 950                 955                 960

Met His His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu
                965                 970                 975

Gln Gly Leu Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly Leu Leu
            980                 985                 990

Tyr Ser Gly Cys Arg Leu Thr Leu  Leu Arg Pro Glu Lys  Asn Gly Ala
        995                 1000                1005

Ala Thr  Gly Met Asp Ala Ile  Cys Ser His Arg Leu  Asp Pro Lys
    1010                1015                1020

Ser Pro  Gly Leu Asn Arg Glu  Gln Leu Tyr Trp Glu  Leu Ser Gln
    1025                1030                1035

Leu Thr  His Gly Ile Lys Glu  Leu Gly Pro Tyr Thr  Leu Asp Arg
    1040                1045                1050

Asn Ser  Leu Tyr Val Asn Gly  Phe Thr His Arg Ser  Ser Val Ala
    1055                1060                1065

Pro Thr  Ser Thr Pro Gly Thr  Ser Thr Val Asp Leu  Gly Thr Ser
    1070                1075                1080

Gly Thr  Pro Ser Ser Leu Pro  Ser Pro Thr Thr Ala  Val Pro Leu
    1085                1090                1095

Leu Val  Pro Phe Thr Leu Asn  Phe Thr Ile Thr Asn  Leu Gln Tyr
    1100                1105                1110

Gly Glu  Asp Met Arg His Pro  Gly Ser Arg Lys Phe  Asn Thr Thr
    1115                1120                1125

Glu Arg  Val Leu Gln Gly Leu  Leu Gly Pro Leu Phe  Lys Asn Ser
    1130                1135                1140

Ser Val  Gly Pro Leu Tyr Ser  Gly Cys Arg Leu Ile  Ser Leu Arg
    1145                1150                1155

Ser Glu  Lys Asp Gly Ala Ala  Thr Gly Val Asp Ala  Ile Cys Thr
    1160                1165                1170

His His  Leu Asn Pro Gln Ser  Pro Gly Leu Asp Arg  Glu Gln Leu
```

1175 1180 1185

Tyr Trp Gln Leu Ser Gln Met Thr Asn Gly Ile Lys Glu Leu Gly
1190 1195 1200

Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr
1205 1210 1215

His Arg Ser Ser Gly Leu Thr Thr Ser Thr Pro Trp Thr Ser Thr
1220 1225 1230

Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Pro Val Pro Ser Pro
1235 1240 1245

Thr Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr
1250 1255 1260

Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser
1265 1270 1275

Arg Lys Phe Asn Ala Thr Glu Arg Val Leu Gln Gly Leu Leu Ser
1280 1285 1290

Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu Tyr Ser Gly Cys
1295 1300 1305

Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Gly
1310 1315 1320

Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg Pro Gly
1325 1330 1335

Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His
1340 1345 1350

Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu
1355 1360 1365

Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro Thr Thr Ser
1370 1375 1380

Thr Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly Thr Pro
1385 1390 1395

Ser Ser Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile Pro
1400 1405 1410

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Phe Thr  Phe Asn Phe Thr Ile  Thr Asn Leu His Tyr  Glu Glu Asn
    1415                 1420                 1425

Met Gln  His Pro Gly Ser Arg  Lys Phe Asn Thr Thr  Glu Arg Val
    1430                 1435                 1440

Leu Gln  Gly Leu Leu Lys Pro  Leu Phe Lys Asn Thr  Ser Val Gly
    1445                 1450                 1455

Pro Leu  Tyr Ser Gly Cys Arg  Leu Thr Ser Leu Arg  Pro Glu Lys
    1460                 1465                 1470

Asp Gly  Ala Ala Thr Gly Met  Asp Ala Val Cys Leu  Tyr His Pro
    1475                 1480                 1485

Asn Pro  Lys Arg Pro Gly Leu  Asp Arg Glu Gln Leu  Tyr Cys Glu
    1490                 1495                 1500

Leu Ser  Gln Leu Thr His Asn  Ile Thr Glu Leu Gly  Pro Tyr Ser
    1505                 1510                 1515

Leu Asp  Arg Asp Ser Leu Tyr  Val Asn Gly Phe Thr  His Gln Asn
    1520                 1525                 1530

Ser Val  Pro Thr Thr Ser Thr  Pro Gly Thr Ser Thr  Val Tyr Trp
    1535                 1540                 1545

Ala Thr  Thr Gly Thr Pro Ser  Ser Phe Pro Gly His  Thr Glu Pro
    1550                 1555                 1560

Gly Pro  Leu Leu Ile Pro Phe  Thr Phe Asn Phe Thr  Ile Thr Asn
    1565                 1570                 1575

Leu His  Tyr Glu Glu Asn Met  Gln His Pro Gly Ser  Arg Lys Phe
    1580                 1585                 1590

Asn Thr  Thr Glu Arg Val Leu  Gln Gly Leu Leu Lys  Pro Leu Phe
    1595                 1600                 1605

Lys Asn  Thr Ser Val Gly Pro  Leu Tyr Ser Gly Cys  Arg Leu Thr
    1610                 1615                 1620

Leu Leu  Arg Pro Glu Lys His  Glu Ala Ala Thr Gly  Val Asp Thr
    1625                 1630                 1635

Ile Cys  Thr His Arg Val Asp  Pro Ile Gly Pro Gly  Leu Asp Arg
    1640                 1645                 1650
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Glu Arg  Leu Tyr Trp Glu Leu  Ser Gln Leu Thr Asn  Ser Ile Thr
    1655                 1660                 1665

Glu Leu  Gly Pro Tyr Thr Leu  Asp Arg Asp Ser Leu  Tyr Val Asn
    1670                 1675                 1680

Gly Phe  Asn Pro Arg Ser Ser  Val Pro Thr Thr Ser  Thr Pro Gly
    1685                 1690                 1695

Thr Ser  Thr Val His Leu Ala  Thr Ser Gly Thr Pro  Ser Ser Leu
    1700                 1705                 1710

Pro Gly  His Thr Ala Pro Val  Pro Leu Leu Ile Pro  Phe Thr Leu
    1715                 1720                 1725

Asn Phe  Thr Ile Thr Asn Leu  His Tyr Glu Glu Asn  Met Gln His
    1730                 1735                 1740

Pro Gly  Ser Arg Lys Phe Asn  Thr Thr Glu Arg Val  Leu Gln Gly
    1745                 1750                 1755

Leu Leu  Lys Pro Leu Phe Lys  Asn Thr Ser Val Gly  Pro Leu Tyr
    1760                 1765                 1770

Ser Gly  Cys Arg Leu Thr Leu  Leu Arg Pro Glu Lys  His Glu Ala
    1775                 1780                 1785

Ala Thr  Gly Val Asp Thr Ile  Cys Thr His Arg Val  Asp Pro Ile
    1790                 1795                 1800

Gly Pro  Gly Leu Asp Arg Glu  Xaa Leu Tyr Trp Glu  Leu Ser Xaa
    1805                 1810                 1815

Leu Thr  Xaa Xaa Ile Xaa Glu  Leu Gly Pro Tyr Xaa  Leu Asp Arg
    1820                 1825                 1830

Xaa Ser  Leu Tyr Val Asn Gly  Phe Xaa Xaa Xaa Xaa  Xaa Xaa Xaa
    1835                 1840                 1845

Xaa Thr  Ser Thr Pro Gly Thr  Ser Xaa Val Xaa Leu  Xaa Thr Ser
    1850                 1855                 1860

Gly Thr  Pro Xaa Xaa Xaa Pro  Xaa Xaa Thr Ser Ala  Gly Pro Leu
    1865                 1870                 1875

Leu Val  Pro Phe Thr Leu Asn  Phe Thr Ile Thr Asn  Leu Gln Tyr
    1880                 1885                 1890
```

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Glu Glu  Asp Met His His Pro  Gly Ser Arg Lys Phe  Asn Thr Thr
    1895                 1900                 1905

Glu Arg  Val Leu Gln Gly Leu  Leu Gly Pro Met Phe  Lys Asn Thr
    1910                 1915                 1920

Ser Val  Gly Leu Leu Tyr Ser  Gly Cys Arg Leu Thr  Leu Leu Arg
    1925                 1930                 1935

Pro Glu  Lys Asn Gly Ala Ala  Thr Gly Met Asp Ala  Ile Cys Ser
    1940                 1945                 1950

His Arg  Leu Asp Pro Lys Ser  Pro Gly Leu Asp Arg  Glu Gln Leu
    1955                 1960                 1965

Tyr Trp  Glu Leu Ser Gln Leu  Thr His Gly Ile Lys  Glu Leu Gly
    1970                 1975                 1980

Pro Tyr  Thr Leu Asp Arg Asn  Ser Leu Tyr Val Asn  Gly Phe Thr
    1985                 1990                 1995

His Arg  Ser Ser Val Ala Pro  Thr Ser Thr Pro Gly  Thr Ser Thr
    2000                 2005                 2010

Val Asp  Leu Gly Thr Ser Gly  Thr Pro Ser Ser Leu  Pro Ser Pro
    2015                 2020                 2025

Thr Thr  Ala Val Pro Leu Leu  Val Pro Phe Thr Leu  Asn Phe Thr
    2030                 2035                 2040

Ile Thr  Asn Leu Gln Tyr Gly  Glu Asp Met Arg His  Pro Gly Ser
    2045                 2050                 2055

Arg Lys  Phe Asn Thr Thr Glu  Arg Val Leu Gln Gly  Leu Leu Gly
    2060                 2065                 2070

Pro Leu  Phe Lys Asn Ser Ser  Val Gly Pro Leu Tyr  Ser Gly Cys
    2075                 2080                 2085

Arg Leu  Ile Ser Leu Arg Ser  Glu Lys Asp Gly Ala  Ala Thr Gly
    2090                 2095                 2100

Val Asp  Ala Ile Cys Thr His  His Leu Asn Pro Gln  Ser Pro Gly
    2105                 2110                 2115

Leu Asp  Arg Glu Gln Leu Tyr  Trp Gln Leu Ser Gln  Met Thr Asn
```

2120 2125 2130

Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu
2135 2140 2145

Tyr Val Asn Gly Phe Thr His Arg Ser Ser Gly Leu Thr Thr Ser
2150 2155 2160

Thr Pro Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro
2165 2170 2175

Ser Pro Val Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Val Pro
2180 2185 2190

Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp
2195 2200 2205

Met His Arg Pro Gly Ser Arg Lys Phe Asn Ala Thr Glu Arg Val
2210 2215 2220

Leu Gln Gly Leu Leu Ser Pro Ile Phe Lys Asn Ser Ser Val Gly
2225 2230 2235

Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys
2240 2245 2250

Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro
2255 2260 2265

Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu
2270 2275 2280

Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser
2285 2290 2295

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Gln Ser
2300 2305 2310

Ser Met Thr Thr Thr Arg Thr Pro Asp Thr Ser Thr Met His Leu
2315 2320 2325

Ala Thr Ser Arg Thr Pro Ala Ser Leu Ser Gly Pro Thr Thr Ala
2330 2335 2340

Ser Pro Leu Leu Val Leu Phe Thr Ile Asn Cys Thr Ile Thr Asn
2345 2350 2355

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Leu Gln  Tyr Glu Glu Asp Met  Arg Arg Thr Gly Ser  Arg Lys Phe
    2360                 2365                 2370

Asn Thr  Met Glu Ser Val Leu  Gln Gly Leu Leu Lys  Pro Leu Phe
    2375                 2380                 2385

Lys Asn  Thr Ser Val Gly Pro  Leu Tyr Ser Gly Cys  Arg Leu Thr
    2390                 2395                 2400

Leu Leu  Arg Pro Lys Lys Asp  Gly Ala Ala Thr Gly  Val Asp Ala
    2405                 2410                 2415

Ile Cys  Thr His Arg Leu Asp  Pro Lys Ser Pro Gly  Leu Asn Arg
    2420                 2425                 2430

Glu Gln  Leu Tyr Trp Glu Leu  Ser Lys Leu Thr Asn  Asp Ile Glu
    2435                 2440                 2445

Glu Leu  Gly Pro Tyr Thr Leu  Asp Arg Asn Ser Leu  Tyr Val Asn
    2450                 2455                 2460

Gly Phe  Thr His Gln Ser Ser  Val Ser Thr Thr Ser  Thr Pro Gly
    2465                 2470                 2475

Thr Ser  Thr Val Asp Leu Arg  Thr Ser Gly Thr Pro  Ser Ser Leu
    2480                 2485                 2490

Ser Ser  Pro Thr Ile Met Xaa  Xaa Xaa Pro Leu Leu  Xaa Pro Phe
    2495                 2500                 2505

Thr Leu  Asn Phe Thr Ile Thr  Asn Leu Xaa Tyr Glu  Glu Xaa Met
    2510                 2515                 2520

Xaa Xaa  Pro Gly Ser Arg Lys  Phe Asn Thr Thr Glu  Arg Val Leu
    2525                 2530                 2535

Gln Gly  Leu Leu Arg Pro Leu  Phe Lys Asn Thr Ser  Val Ser Ser
    2540                 2545                 2550

Leu Tyr  Ser Gly Cys Arg Leu  Thr Leu Leu Arg Pro  Glu Lys Asp
    2555                 2560                 2565

Gly Ala  Ala Thr Arg Val Asp  Ala Ala Cys Thr Tyr  Arg Pro Asp
    2570                 2575                 2580

Pro Lys  Ser Pro Gly Leu Asp  Arg Glu Gln Leu Tyr  Trp Glu Leu
    2585                 2590                 2595
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Ser Gln  Leu Thr His Ser Ile  Thr Glu Leu Gly Pro  Tyr Thr Leu
    2600                  2605                  2610

Asp Arg  Val Ser Leu Tyr Val  Asn Gly Phe Asn Pro  Arg Ser Ser
    2615                  2620                  2625

Val Pro  Thr Thr Ser Thr Pro  Gly Thr Ser Thr Val  His Leu Ala
    2630                  2635                  2640

Thr Ser  Gly Thr Pro Ser Ser  Leu Pro Gly His Thr  Ala Pro Val
    2645                  2650                  2655

Pro Leu  Leu Ile Pro Phe Thr  Leu Asn Phe Thr Ile  Thr Asn Leu
    2660                  2665                  2670

His Tyr  Glu Glu Asn Met Gln  His Pro Gly Ser Arg  Lys Phe Asn
    2675                  2680                  2685

Thr Thr  Glu Arg Val Leu Gln  Gly Leu Leu Arg Pro  Leu Phe Lys
    2690                  2695                  2700

Ser Thr  Ser Val Gly Pro Leu  Tyr Ser Gly Cys Arg  Leu Thr Leu
    2705                  2710                  2715

Leu Arg  Pro Glu Lys His Gly  Ala Ala Thr Gly Val  Asp Ala Ile
    2720                  2725                  2730

Cys Thr  Leu Arg Leu Asp Pro  Thr Gly Pro Gly Leu  Asp Arg Glu
    2735                  2740                  2745

Arg Leu  Tyr Trp Glu Leu Ser  Gln Leu Thr Asn Ser  Val Thr Glu
    2750                  2755                  2760

Leu Gly  Pro Tyr Thr Leu Asp  Arg Asp Ser Leu Tyr  Val Asn Gly
    2765                  2770                  2775

Phe Thr  Gln Arg Ser Ser Val  Pro Thr Thr Ser Ile  Pro Gly Thr
    2780                  2785                  2790

Ser Ala  Val His Leu Glu Thr  Ser Gly Thr Pro Ala  Ser Leu Pro
    2795                  2800                  2805

Gly His  Thr Ala Pro Gly Pro  Leu Leu Val Pro Phe  Thr Leu Asn
    2810                  2815                  2820

Phe Thr  Ile Thr Asn Leu Gln  Tyr Glu Val Asp Met  Arg His Pro
    2825                  2830                  2835
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Gly Ser  Arg Lys Phe Asn Thr  Thr Glu Arg Val Leu  Gln Gly Leu
    2840                 2845                 2850

Leu Lys  Pro Leu Phe Lys Ser  Thr Ser Val Gly Pro  Leu Tyr Ser
    2855                 2860                 2865

Gly Cys  Arg Leu Thr Leu Leu  Arg Pro Glu Lys Arg  Gly Ala Ala
    2870                 2875                 2880

Thr Gly  Val Asp Thr Ile Cys  Thr His Arg Leu Asp  Pro Leu Asn
    2885                 2890                 2895

Pro Gly  Leu Asp Arg Glu Gln  Leu Tyr Trp Glu Leu  Ser Lys Leu
    2900                 2905                 2910

Thr Arg  Gly Ile Ile Glu Leu  Gly Pro Tyr Leu Leu  Asp Arg Gly
    2915                 2920                 2925

Ser Leu  Tyr Val Asn Gly Phe  Thr His Arg Asn Phe  Val Pro Ile
    2930                 2935                 2940

Thr Ser  Thr Pro Gly Thr Ser  Thr Val His Leu Gly  Thr Ser Glu
    2945                 2950                 2955

Thr Pro  Ser Ser Leu Pro Arg  Pro Ile Val Pro Gly  Pro Leu Leu
    2960                 2965                 2970

Val Pro  Phe Thr Leu Asn Phe  Thr Ile Thr Asn Leu  Gln Tyr Glu
    2975                 2980                 2985

Glu Ala  Met Arg His Pro Gly  Ser Arg Lys Phe Asn  Thr Thr Glu
    2990                 2995                 3000

Arg Val  Leu Gln Gly Leu Leu  Arg Pro Leu Phe Lys  Asn Thr Ser
    3005                 3010                 3015

Ile Gly  Pro Leu Tyr Ser Ser  Cys Arg Leu Thr Leu  Leu Arg Pro
    3020                 3025                 3030

Glu Lys  Asp Lys Ala Ala Thr  Arg Val Asp Ala Ile  Cys Thr His
    3035                 3040                 3045

His Pro  Asp Pro Gln Ser Pro  Gly Leu Asn Arg Glu  Gln Leu Tyr
    3050                 3055                 3060

Trp Glu  Leu Ser Gln Leu Thr  His Gly Ile Thr Glu  Leu Gly Pro
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3065 3070 3075

Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asp Gly Phe Thr His
3080 3085 3090

Trp Ser Pro Ile Pro Thr Thr Ser Thr Pro Gly Thr Ser Ile Val
3095 3100 3105

Asn Leu Gly Thr Ser Gly Ile Pro Pro Ser Leu Pro Glu Thr Thr
3110 3115 3120

Xaa Xaa Xaa Pro Leu Leu Xaa Pro Phe Thr Leu Asn Phe Thr Ile
3125 3130 3135

Thr Asn Leu Xaa Tyr Glu Glu Xaa Met Xaa Xaa Pro Gly Ser Arg
3140 3145 3150

Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Lys Pro
3155 3160 3165

Leu Phe Arg Asn Ser Ser Leu Glu Tyr Leu Tyr Ser Gly Cys Arg
3170 3175 3180

Leu Ala Ser Leu Arg Pro Glu Lys Asp Ser Ser Ala Met Ala Val
3185 3190 3195

Asp Ala Ile Cys Thr His Arg Pro Asp Pro Glu Asp Leu Gly Leu
3200 3205 3210

Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Asn Leu Thr Asn Gly
3215 3220 3225

Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr
3230 3235 3240

Val Asn Gly Phe Thr His Arg Ser Ser Phe Leu Thr Thr Ser Thr
3245 3250 3255

Pro Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser
3260 3265 3270

Pro Val Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Val Pro Phe
3275 3280 3285

Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met
3290 3295 3300

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His Arg  Pro Gly Ser Arg Arg  Phe Asn Thr Thr Glu  Arg Val Leu
    3305                 3310                 3315

Gln Gly  Leu Leu Thr Pro Leu  Phe Lys Asn Thr Ser  Val Gly Pro
    3320                 3325                 3330

Leu Tyr  Ser Gly Cys Arg Leu  Thr Leu Leu Arg Pro  Glu Lys Gln
    3335                 3340                 3345

Glu Ala  Ala Thr Gly Val Asp  Thr Ile Cys Thr His  Arg Val Asp
    3350                 3355                 3360

Pro Ile  Gly Pro Gly Leu Asp  Arg Glu Arg Leu Tyr  Trp Glu Leu
    3365                 3370                 3375

Ser Gln  Leu Thr Asn Ser Ile  Thr Glu Leu Gly Pro  Tyr Thr Leu
    3380                 3385                 3390

Asp Arg  Asp Ser Leu Tyr Val  Asn Gly Phe Asn Pro  Trp Ser Ser
    3395                 3400                 3405

Val Pro  Thr Thr Ser Thr Pro  Gly Thr Ser Thr Val  His Leu Ala
    3410                 3415                 3420

Thr Ser  Gly Thr Pro Ser Ser  Leu Pro Gly His Thr  Ala Pro Val
    3425                 3430                 3435

Pro Leu  Leu Ile Pro Phe Thr  Leu Asn Phe Thr Ile  Thr Asp Leu
    3440                 3445                 3450

His Tyr  Glu Glu Asn Met Gln  His Pro Gly Ser Arg  Lys Phe Asn
    3455                 3460                 3465

Thr Thr  Glu Arg Val Leu Gln  Gly Leu Leu Lys Pro  Leu Phe Lys
    3470                 3475                 3480

Ser Thr  Ser Val Gly Pro Leu  Tyr Ser Gly Cys Arg  Leu Thr Leu
    3485                 3490                 3495

Leu Arg  Pro Glu Lys His Gly  Ala Ala Thr Gly Val  Asp Ala Ile
    3500                 3505                 3510

Cys Thr  Leu Arg Leu Asp Pro  Thr Gly Pro Gly Leu  Asp Arg Glu
    3515                 3520                 3525

Arg Leu  Tyr Trp Glu Leu Ser  Gln Leu Thr Asn Ser  Val Thr Glu
    3530                 3535                 3540
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Leu Gly  Pro Tyr Thr Leu Asp  Arg Asp Ser Leu Tyr  Val Asn Gly
    3545                 3550                 3555

Phe Thr  His Arg Ser Ser Val  Pro Thr Thr Ser Ile  Pro Gly Thr
    3560                 3565                 3570

Ser Ala  Val His Leu Glu Thr  Ser Gly Thr Pro Ala  Ser Leu Pro
    3575                 3580                 3585

Gly His  Thr Ala Pro Gly Pro  Leu Leu Val Pro Phe  Thr Leu Asn
    3590                 3595                 3600

Phe Thr  Ile Thr Asn Leu Gln  Tyr Glu Glu Asp Met  Arg His Pro
    3605                 3610                 3615

Gly Ser  Arg Lys Phe Ser Thr  Thr Glu Arg Val Leu  Gln Gly Leu
    3620                 3625                 3630

Leu Lys  Pro Leu Phe Lys Asn  Thr Ser Val Ser Ser  Leu Tyr Ser
    3635                 3640                 3645

Gly Cys  Arg Leu Thr Leu Leu  Arg Pro Glu Lys Asp  Gly Ala Ala
    3650                 3655                 3660

Thr Arg  Val Asp Ala Val Cys  Thr His Arg Pro Asp  Pro Lys Ser
    3665                 3670                 3675

Pro Gly  Leu Asp Arg Glu Arg  Leu Tyr Trp Lys Leu  Ser Gln Leu
    3680                 3685                 3690

Thr His  Gly Ile Thr Glu Leu  Gly Pro Tyr Thr Leu  Asp Arg His
    3695                 3700                 3705

Ser Leu  Tyr Val Asn Gly Phe  Thr His Gln Ser Ser  Met Thr Thr
    3710                 3715                 3720

Thr Arg  Thr Pro Asp Thr Ser  Thr Met His Leu Ala  Thr Ser Arg
    3725                 3730                 3735

Thr Pro  Ala Ser Leu Ser Gly  Pro Thr Thr Ala Ser  Pro Leu Leu
    3740                 3745                 3750

Val Leu  Phe Thr Ile Asn Phe  Thr Ile Thr Asn Gln  Arg Tyr Glu
    3755                 3760                 3765

Glu Asn  Met His His Pro Gly  Ser Arg Lys Phe Asn  Thr Thr Glu
    3770                 3775                 3780
```

Arg Val Leu Gln Gly Leu Leu Arg Pro Val Phe Lys Asn Thr Ser
3785 3790 3795

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro
3800 3805 3810

Lys Lys Asp Gly Ala Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr
3815 3820 3825

Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr
3830 3835 3840

Trp Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro
3845 3850 3855

Tyr Thr Gln Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His
3860 3865 3870

Arg Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr Ser Ala Val
3875 3880 3885

His Leu Glu Thr Ser Gly Thr Pro Ala Ser Leu Pro Gly His Thr
3890 3895 3900

Ala Pro Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile
3905 3910 3915

Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg
3920 3925 3930

Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Lys Pro
3935 3940 3945

Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg
3950 3955 3960

Leu Thr Leu Leu Arg Pro Glu Lys Arg Gly Ala Ala Thr Gly Val
3965 3970 3975

Asp Thr Ile Cys Thr His Arg Leu Asp Pro Leu Asn Pro Gly Leu
3980 3985 3990

Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr Arg Gly
3995 4000 4005

Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp Arg Gly Ser Leu Tyr

4010 4015 4020

Val Asn Gly Phe Thr His Arg Thr Ser Val Pro Thr Thr Ser Thr
4025 4030 4035

Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Phe
4040 4045 4050

Ser Leu Pro Ser Pro Ala Xaa Xaa Xaa Pro Leu Leu Xaa Pro Phe
4055 4060 4065

Thr Leu Asn Phe Thr Ile Thr Asn Leu Xaa Tyr Glu Glu Xaa Met
4070 4075 4080

Xaa Xaa Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu
4085 4090 4095

Gln Thr Leu Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly Leu
4100 4105 4110

Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Ser Glu Lys Asp
4115 4120 4125

Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu Asp
4130 4135 4140

Pro Lys Ser Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp Glu Leu
4145 4150 4155

Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu
4160 4165 4170

Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Trp Ile Pro
4175 4180 4185

Val Pro Thr Ser Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly
4190 4195 4200

Ser Gly Thr Pro Ser Leu Pro Ser Ser Pro Thr Thr Ala Gly Pro
4205 4210 4215

Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Lys
4220 4225 4230

Tyr Glu Glu Asp Met His Cys Pro Gly Ser Arg Lys Phe Asn Thr
4235 4240 4245

Thr Glu Arg Val Leu Gln Ser Leu Leu Gly Pro Met Phe Lys Asn
4250 4255 4260

Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu
4265 4270 4275

Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys
4280 4285 4290

Thr His Arg Leu Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln
4295 4300 4305

Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu
4310 4315 4320

Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe
4325 4330 4335

Thr His Gln Thr Ser Ala Pro Asn Thr Ser Thr Pro Gly Thr Ser
4340 4345 4350

Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Ser Leu Pro Ser
4355 4360 4365

Pro Thr Xaa Xaa Xaa Pro Leu Leu Xaa Pro Phe Thr Leu Asn Phe
4370 4375 4380

Thr Ile Thr Asn Leu Xaa Tyr Glu Glu Xaa Met Xaa Xaa Pro Gly
4385 4390 4395

Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu
4400 4405 4410

Xaa Pro Xaa Phe Lys Xaa Thr Ser Val Gly Xaa Leu Tyr Ser Gly
4415 4420 4425

Cys Arg Leu Thr Leu Leu Arg Xaa Glu Lys Xaa Xaa Ala Ala Thr
4430 4435 4440

Xaa Val Asp Xaa Xaa Cys Xaa Xaa Xaa Xaa Asp Pro Xaa Xaa Pro
4445 4450 4455

Gly Leu Asp Arg Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa Leu Thr
4460 4465 4470

Xaa Xaa Ile Xaa Glu Leu Gly Pro Tyr Xaa Leu Asp Arg Xaa Ser
4475 4480 4485

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Leu Tyr  Val Asn Gly Phe Thr  His Trp Ile Pro Val  Pro Thr Ser
    4490                 4495                 4500

Ser Thr  Pro Gly Thr Ser Thr  Val Asp Leu Gly Ser  Gly Thr Pro
    4505                 4510                 4515

Ser Ser  Leu Pro Ser Pro Thr  Thr Ala Gly Pro Leu  Leu Val Pro
    4520                 4525                 4530

Phe Thr  Leu Asn Phe Thr Ile  Thr Asn Leu Lys Tyr  Glu Glu Asp
    4535                 4540                 4545

Met His  Cys Pro Gly Ser Arg  Lys Phe Asn Thr Thr  Glu Arg Val
    4550                 4555                 4560

Leu Gln  Ser Leu Leu Gly Pro  Met Phe Lys Asn Thr  Ser Val Gly
    4565                 4570                 4575

Pro Leu  Tyr Ser Gly Cys Arg  Leu Thr Ser Leu Arg  Ser Glu Lys
    4580                 4585                 4590

Asp Gly  Ala Ala Thr Gly Val  Asp Ala Ile Cys Thr  His Arg Val
    4595                 4600                 4605

Asp Pro  Lys Ser Pro Gly Val  Asp Arg Glu Gln Leu  Tyr Trp Glu
    4610                 4615                 4620

Leu Ser  Gln Leu Thr Asn Gly  Ile Lys Glu Leu Gly  Pro Tyr Thr
    4625                 4630                 4635

Leu Asp  Arg Asn Ser Leu Tyr  Val Asn Gly Phe Thr  His Gln Thr
    4640                 4645                 4650

Ser Ala  Pro Asn Thr Ser Thr  Pro Gly Thr Ser Thr  Val Asp Leu
    4655                 4660                 4665

Gly Thr  Ser Gly Thr Pro Ser  Ser Leu Pro Ser Pro  Thr Ser Ala
    4670                 4675                 4680

Gly Pro  Leu Leu Val Pro Phe  Thr Leu Asn Phe Thr  Ile Thr Asn
    4685                 4690                 4695

Leu Gln  Tyr Glu Glu Asp Met  His His Pro Gly Ser  Arg Lys Phe
    4700                 4705                 4710

Asn Thr  Thr Glu Arg Val Leu  Gln Gly Leu Leu Gly  Pro Met Phe
    4715                 4720                 4725
```

Lys Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr
4730 4735 4740

Leu Leu Arg Pro Glu Lys Asn Gly Ala Ala Thr Gly Met Asp Ala
4745 4750 4755

Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asp Arg
4760 4765 4770

Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa Leu Thr Xaa Xaa Ile Xaa
4775 4780 4785

Glu Leu Gly Pro Tyr Xaa Leu Asp Arg Xaa Ser Leu Tyr Val Asn
4790 4795 4800

Gly Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Thr Ser Thr Pro Gly
4805 4810 4815

Thr Ser Xaa Val Xaa Leu Xaa Thr Ser Gly Thr Pro Xaa Xaa Xaa
4820 4825 4830

Pro Xaa Xaa Thr Xaa Xaa Xaa Pro Leu Leu Xaa Pro Phe Thr Leu
4835 4840 4845

Asn Phe Thr Ile Thr Asn Leu Xaa Tyr Glu Glu Xaa Met Xaa Xaa
4850 4855 4860

Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly
4865 4870 4875

Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser Leu Glu Tyr Leu Tyr
4880 4885 4890

Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu Lys Asp Ser Ser
4895 4900 4905

Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro Glu
4910 4915 4920

Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Asn
4925 4930 4935

Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp Arg
4940 4945 4950

Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Met Pro

4955 4960 4965

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Val Gly Thr Ser
4970 4975 4980

Gly Thr Pro Ser Ser Ser Pro Ser Pro Thr Thr Ala Gly Pro Leu
4985 4990 4995

Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr
5000 5005 5010

Gly Glu Asp Met Gly His Pro Gly Ser Arg Lys Phe Asn Thr Thr
5015 5020 5025

Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Ile Phe Lys Asn Thr
5030 5035 5040

Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg
5045 5050 5055

Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Ile
5060 5065 5070

His His Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Arg Leu
5075 5080 5085

Tyr Trp Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly
5090 5095 5100

Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr
5105 5110 5115

His Arg Thr Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr
5120 5125 5130

Val Asp Leu Gly Thr Ser Gly Thr Pro Phe Ser Leu Pro Ser Pro
5135 5140 5145

Ala Thr Ala Gly Pro Leu Leu Val Leu Phe Thr Leu Asn Phe Thr
5150 5155 5160

Ile Thr Asn Leu Lys Tyr Glu Glu Asp Met His Arg Pro Gly Ser
5165 5170 5175

Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Thr Leu Leu Gly
5180 5185 5190

Pro Met Phe Lys Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys
5195 5200 5205

Arg Leu Thr Leu Leu Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly
5210 5215 5220

Val Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly
5225 5230 5235

Leu Asp Arg Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa Leu Thr Xaa
5240 5245 5250

Xaa Ile Xaa Glu Leu Gly Pro Tyr Xaa Leu Asp Arg Xaa Ser Leu
5255 5260 5265

Tyr Val Asn Gly Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Thr Ser
5270 5275 5280

Thr Pro Gly Thr Ser Xaa Val Xaa Leu Xaa Thr Ser Gly Thr Pro
5285 5290 5295

Xaa Xaa Xaa Pro Xaa Xaa Thr Xaa Xaa Xaa Pro Leu Leu Xaa Pro
5300 5305 5310

Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Xaa Tyr Glu Glu Xaa
5315 5320 5325

Met Xaa Xaa Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val
5330 5335 5340

Leu Gln Gly Leu Leu Arg Pro Val Phe Lys Asn Thr Ser Val Gly
5345 5350 5355

Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys
5360 5365 5370

Asp Gly Ala Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro
5375 5380 5385

Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu
5390 5395 5400

Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr
5405 5410 5415

Gln Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser
5420 5425 5430

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Ser Val  Pro Thr Thr Ser Ile  Pro Gly Thr Ser Ala  Val His Leu
    5435                 5440                 5445

Glu Thr  Thr Gly Thr Pro Ser  Ser Phe Pro Gly His  Thr Glu Pro
    5450                 5455                 5460

Gly Pro  Leu Leu Ile Pro Phe  Thr Phe Asn Phe Thr  Ile Thr Asn
    5465                 5470                 5475

Leu Arg  Tyr Glu Glu Asn Met  Gln His Pro Gly Ser  Arg Lys Phe
    5480                 5485                 5490

Asn Thr  Thr Glu Arg Val Leu  Gln Gly Leu Leu Thr  Pro Leu Phe
    5495                 5500                 5505

Lys Asn  Thr Ser Val Gly Pro  Leu Tyr Ser Gly Cys  Arg Leu Thr
    5510                 5515                 5520

Leu Leu  Arg Pro Glu Lys Gln  Glu Ala Ala Thr Gly  Val Asp Thr
    5525                 5530                 5535

Ile Cys  Thr His Arg Val Asp  Pro Ile Gly Pro Gly  Leu Asp Arg
    5540                 5545                 5550

Glu Arg  Leu Tyr Trp Glu Leu  Ser Gln Leu Thr Asn  Ser Ile Thr
    5555                 5560                 5565

Glu Leu  Gly Pro Tyr Thr Leu  Asp Arg Asp Ser Leu  Tyr Val Asp
    5570                 5575                 5580

Gly Phe  Asn Pro Trp Ser Ser  Val Pro Thr Thr Ser  Thr Pro Gly
    5585                 5590                 5595

Thr Ser  Thr Val His Leu Ala  Thr Ser Gly Thr Pro  Ser Pro Leu
    5600                 5605                 5610

Pro Gly  His Thr Ala Pro Val  Pro Leu Leu Ile Pro  Phe Thr Leu
    5615                 5620                 5625

Asn Phe  Thr Ile Thr Asp Leu  His Tyr Glu Glu Asn  Met Gln His
    5630                 5635                 5640

Pro Gly  Ser Arg Lys Phe Asn  Thr Thr Glu Arg Val  Leu Gln Gly
    5645                 5650                 5655

Leu Leu  Lys Pro Leu Phe Lys  Ser Thr Ser Val Gly  Pro Leu Tyr
    5660                 5665                 5670
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Ser Gly  Cys Arg Leu Thr Leu  Leu Arg Pro Glu Lys  His Gly Ala
    5675                 5680                 5685

Ala Thr  Gly Val Asp Ala Ile  Cys Thr Leu Arg Leu  Asp Pro Thr
    5690                 5695                 5700

Gly Pro  Gly Leu Asp Arg Glu  Arg Leu Tyr Trp Glu  Leu Ser Gln
    5705                 5710                 5715

Leu Thr  Asn Ser Ile Thr Glu  Leu Gly Pro Tyr Thr  Leu Asp Arg
    5720                 5725                 5730

Asp Ser  Leu Tyr Val Asn Gly  Phe Asn Pro Trp Ser  Ser Val Pro
    5735                 5740                 5745

Thr Thr  Ser Thr Pro Gly Thr  Ser Thr Val His Leu  Ala Thr Ser
    5750                 5755                 5760

Gly Thr  Pro Ser Ser Leu Pro  Gly His Thr Thr Ala  Gly Pro Leu
    5765                 5770                 5775

Leu Val  Pro Phe Thr Leu Asn  Phe Thr Ile Thr Asn  Leu Lys Tyr
    5780                 5785                 5790

Glu Glu  Asp Met His Cys Pro  Gly Ser Arg Lys Phe  Asn Thr Thr
    5795                 5800                 5805

Glu Arg  Val Leu Gln Ser Leu  His Gly Pro Met Phe  Lys Asn Thr
    5810                 5815                 5820

Ser Val  Gly Pro Leu Tyr Ser  Gly Cys Arg Leu Thr  Leu Leu Arg
    5825                 5830                 5835

Ser Glu  Lys Asp Gly Ala Ala  Thr Gly Val Asp Ala  Ile Cys Thr
    5840                 5845                 5850

His Arg  Leu Asp Pro Lys Ser  Pro Gly Leu Asp Arg  Glu Xaa Leu
    5855                 5860                 5865

Tyr Trp  Glu Leu Ser Xaa Leu  Thr Xaa Xaa Ile Xaa  Glu Leu Gly
    5870                 5875                 5880

Pro Tyr  Xaa Leu Asp Arg Xaa  Ser Leu Tyr Val Asn  Gly Phe Xaa
    5885                 5890                 5895

Xaa Xaa  Xaa Xaa Xaa Xaa Xaa  Thr Ser Thr Pro Gly  Thr Ser Xaa
```

5900 5905 5910

Val Xaa Leu Xaa Thr Ser Gly Thr Pro Xaa Xaa Xaa Pro Xaa Xaa
5915 5920 5925

Thr Xaa Xaa Xaa Pro Leu Leu Xaa Pro Phe Thr Leu Asn Phe Thr
5930 5935 5940

Ile Thr Asn Leu Xaa Tyr Glu Glu Xaa Met Xaa Xaa Pro Gly Ser
5945 5950 5955

Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Xaa
5960 5965 5970

Pro Xaa Phe Lys Xaa Thr Ser Val Gly Xaa Leu Tyr Ser Gly Cys
5975 5980 5985

Arg Leu Thr Leu Leu Arg Xaa Glu Lys Xaa Xaa Ala Ala Thr Xaa
5990 5995 6000

Val Asp Xaa Xaa Cys Xaa Xaa Xaa Xaa Asp Pro Xaa Xaa Pro Gly
6005 6010 6015

Leu Asp Arg Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa Leu Thr Asn
6020 6025 6030

Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu
6035 6040 6045

Tyr Val Asn Gly Phe Thr His Arg Ser Ser Met Pro Thr Thr Ser
6050 6055 6060

Ile Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly Thr Pro
6065 6070 6075

Ala Ser Leu Pro Gly His Thr Ala Pro Gly Pro Leu Leu Val Pro
6080 6085 6090

Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp
6095 6100 6105

Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val
6110 6115 6120

Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly
6125 6130 6135

```
Pro Leu  Tyr Ser Gly Cys Arg  Leu Thr Leu Leu Arg  Pro Glu Lys
    6140                 6145                 6150

Arg Gly  Ala Ala Thr Gly Val  Asp Thr Ile Cys Thr  His Arg Leu
    6155                 6160                 6165

Asp Pro  Leu Asn Pro Gly Leu  Asp Arg Glu Xaa Leu  Tyr Trp Glu
    6170                 6175                 6180

Leu Ser  Xaa Leu Thr Xaa Xaa  Ile Xaa Glu Leu Gly  Pro Tyr Xaa
    6185                 6190                 6195

Leu Asp  Arg Xaa Ser Leu Tyr  Val Asn Gly Phe Xaa  Xaa Xaa Xaa
    6200                 6205                 6210

Xaa Xaa  Xaa Xaa Thr Ser Thr  Pro Gly Thr Ser Xaa  Val Xaa Leu
    6215                 6220                 6225

Xaa Thr  Ser Gly Thr Pro Xaa  Xaa Xaa Pro Xaa Xaa  Thr Xaa Xaa
    6230                 6235                 6240

Xaa Pro  Leu Leu Xaa Pro Phe  Thr Leu Asn Phe Thr  Ile Thr Asn
    6245                 6250                 6255

Leu Xaa  Tyr Glu Glu Xaa Met  Xaa Xaa Pro Gly Ser  Arg Lys Phe
    6260                 6265                 6270

Asn Thr  Thr Glu Arg Val Leu  Gln Gly Leu Leu Xaa  Pro Xaa Phe
    6275                 6280                 6285

Lys Xaa  Thr Ser Val Gly Xaa  Leu Tyr Ser Gly Cys  Arg Leu Thr
    6290                 6295                 6300

Leu Leu  Arg Xaa Glu Lys Xaa  Xaa Ala Ala Thr Xaa  Val Asp Xaa
    6305                 6310                 6315

Xaa Cys  Xaa Xaa Xaa Xaa Asp  Pro Xaa Xaa Pro Gly  Leu Asp Arg
    6320                 6325                 6330

Glu Xaa  Leu Tyr Trp Glu Leu  Ser Xaa Leu Thr Xaa  Xaa Ile Xaa
    6335                 6340                 6345

Glu Leu  Gly Pro Tyr Xaa Leu  Asp Arg Xaa Ser Leu  Tyr Val Asn
    6350                 6355                 6360

Gly Phe  His Pro Arg Ser Ser  Val Pro Thr Thr Ser  Thr Pro Gly
    6365                 6370                 6375
```

Thr Ser Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Ser Leu
6380 6385 6390

Pro Gly His Thr Ala Pro Val Pro Leu Leu Ile Pro Phe Thr Leu
6395 6400 6405

Asn Phe Thr Ile Thr Asn Leu His Tyr Glu Glu Asn Met Gln His
6410 6415 6420

Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly
6425 6430 6435

Leu Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly Leu Leu Tyr
6440 6445 6450

Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asn Gly Ala
6455 6460 6465

Ala Thr Gly Met Asp Ala Ile Cys Ser His Arg Leu Asp Pro Lys
6470 6475 6480

Ser Pro Gly Leu Asp Arg Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa
6485 6490 6495

Leu Thr Xaa Xaa Ile Xaa Glu Leu Gly Pro Tyr Xaa Leu Asp Arg
6500 6505 6510

Xaa Ser Leu Tyr Val Asn Gly Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa
6515 6520 6525

Xaa Thr Ser Thr Pro Gly Thr Ser Xaa Val Xaa Leu Xaa Thr Ser
6530 6535 6540

Gly Thr Pro Xaa Xaa Xaa Pro Xaa Xaa Thr Xaa Xaa Xaa Pro Leu
6545 6550 6555

Leu Xaa Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Xaa Tyr
6560 6565 6570

Glu Glu Xaa Met Xaa Xaa Pro Gly Ser Arg Lys Phe Asn Thr Thr
6575 6580 6585

Glu Arg Val Leu Gln Gly Leu Leu Xaa Pro Xaa Phe Lys Xaa Thr
6590 6595 6600

Ser Val Gly Xaa Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg
6605 6610 6615

Xaa Glu Lys Xaa Xaa Ala Ala Thr Xaa Val Asp Xaa Xaa Cys Xaa
6620 6625 6630

Xaa Xaa Xaa Asp Pro Xaa Xaa Pro Gly Leu Asp Arg Glu Xaa Leu
6635 6640 6645

Tyr Trp Glu Leu Ser Xaa Leu Thr Xaa Xaa Ile Xaa Glu Leu Gly
6650 6655 6660

Pro Tyr Xaa Leu Asp Arg Xaa Ser Leu Tyr Val Asn Gly Phe Thr
6665 6670 6675

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Leu Gln Asn Phe Thr Leu Asp Arg Ser Ser Val Leu Val Asp Gly Tyr
355 360 365

Ser Pro Asn Arg Asn Glu Pro Leu Thr Gly Asn Ser Asp Leu Pro Phe
370 375 380

Trp Ala Val Ile Leu Ile Gly Leu Ala Gly Leu Leu Gly Leu Ile Thr
385 390 395 400

Cys Leu Ile Cys Gly Val Leu Val Thr Thr Arg Arg Arg Lys Lys Glu
405 410 415

Gly Glu Tyr Asn Val Gln Gln Gln Cys Pro Gly Tyr Tyr Gln Ser His
420 425 430

Leu Asp Leu Glu Asp Leu Gln
435

<210> 149
<211> 1799
<212> PRT
<213> Homo sapiens

<400> 149

Arg Thr Asp Gly Ile Met Glu His Ile Thr Lys Ile Pro Asn Glu Ala
1 5 10 15

Ala His Arg Gly Thr Ile Arg Pro Val Lys Gly Pro Gln Thr Ser Thr
20 25 30

Ser Pro Ala Ser Pro Lys Gly Leu His Thr Gly Gly Thr Lys Arg Met
35 40 45

Glu Thr Thr Thr Thr Ala Leu Lys Thr Thr Thr Thr Ala Leu Lys Thr
50 55 60

Thr Ser Arg Ala Thr Leu Thr Thr Ser Val Tyr Thr Pro Thr Leu Gly
65 70 75 80

Thr Leu Thr Pro Leu Asn Ala Ser Arg Gln Met Ala Ser Thr Ile Leu
85 90 95

Thr Glu Met Met Ile Thr Thr Pro Tyr Val Phe Pro Asp Val Pro Glu
100 105 110

Thr Thr Ser Ser Leu Ala Thr Ser Leu Gly Ala Glu Thr Ser Thr Ala
115 120 125

Leu Pro Arg Thr Thr Pro Ser Val Leu Asn Arg Glu Ser Glu Thr Thr
130 135 140

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Ala Ser Leu Val Ser Arg Ser Gly Ala Glu Arg Ser Pro Val Ile Gln
145                 150                 155                 160

Thr Leu Asp Val Ser Ser Ser Glu Pro Asp Thr Thr Ala Ser Trp Val
                165                 170                 175

Ile His Pro Ala Glu Thr Ile Pro Thr Val Ser Lys Thr Thr Pro Asn
            180                 185                 190

Phe Phe His Ser Glu Leu Asp Thr Val Ser Ser Thr Ala Thr Ser His
        195                 200                 205

Gly Ala Asp Val Ser Ser Ala Ile Pro Thr Asn Ile Ser Pro Ser Glu
    210                 215                 220

Leu Asp Ala Leu Thr Pro Leu Val Thr Ile Ser Gly Thr Asp Thr Ser
225                 230                 235                 240

Thr Thr Phe Pro Thr Leu Thr Lys Ser Pro His Glu Thr Glu Thr Arg
                245                 250                 255

Thr Thr Trp Leu Thr His Pro Ala Glu Thr Ser Ser Thr Ile Pro Arg
            260                 265                 270

Thr Ile Pro Asn Phe Ser His His Glu Ser Asp Ala Thr Pro Ser Ile
        275                 280                 285

Ala Thr Ser Pro Gly Ala Glu Thr Ser Ser Ala Ile Pro Ile Met Thr
    290                 295                 300

Val Ser Pro Gly Ala Glu Asp Leu Val Thr Ser Gln Val Thr Ser Ser
305                 310                 315                 320

Gly Thr Asp Arg Asn Met Thr Ile Pro Thr Leu Thr Leu Ser Pro Gly
                325                 330                 335

Glu Pro Lys Thr Ile Ala Ser Leu Val Thr His Pro Glu Ala Gln Thr
            340                 345                 350

Ser Ser Ala Ile Pro Thr Ser Thr Ile Ser Pro Ala Val Ser Arg Leu
        355                 360                 365

Val Thr Ser Met Val Thr Ser Leu Ala Ala Lys Thr Ser Thr Thr Asn
    370                 375                 380

Arg Ala Leu Thr Asn Ser Pro Gly Glu Pro Ala Thr Thr Val Ser Leu
385                 390                 395                 400
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```
Val Thr His Pro Ala Gln Thr Ser Pro Thr Val Pro Trp Thr Thr Ser
                405                 410                 415

Ile Phe Phe His Ser Lys Ser Asp Thr Thr Pro Ser Met Thr Thr Ser
            420                 425                 430

His Gly Ala Glu Ser Ser Ser Ala Val Pro Thr Pro Thr Val Ser Thr
        435                 440                 445

Glu Val Pro Gly Val Val Thr Pro Leu Val Thr Ser Ser Arg Ala Val
    450                 455                 460

Ile Ser Thr Thr Ile Pro Ile Leu Thr Leu Ser Pro Gly Glu Pro Glu
465                 470                 475                 480

Thr Thr Pro Ser Met Ala Thr Ser His Gly Glu Glu Ala Ser Ser Ala
                485                 490                 495

Ile Pro Thr Pro Thr Val Ser Pro Gly Val Pro Gly Val Val Thr Ser
            500                 505                 510

Leu Val Thr Ser Ser Arg Ala Val Thr Ser Thr Thr Ile Pro Ile Leu
        515                 520                 525

Thr Phe Ser Leu Gly Glu Pro Glu Thr Thr Pro Ser Met Ala Thr Ser
    530                 535                 540

His Gly Thr Glu Ala Gly Ser Ala Val Pro Thr Val Leu Pro Glu Val
545                 550                 555                 560

Pro Gly Met Val Thr Ser Leu Val Ala Ser Ser Arg Ala Val Thr Ser
                565                 570                 575

Thr Thr Leu Pro Thr Leu Thr Leu Ser Pro Gly Glu Pro Glu Thr Thr
            580                 585                 590

Pro Ser Met Ala Thr Ser His Gly Ala Glu Ala Ser Ser Thr Val Pro
        595                 600                 605

Thr Val Ser Pro Glu Val Pro Gly Val Val Thr Ser Leu Val Thr Ser
    610                 615                 620

Ser Ser Gly Val Asn Ser Thr Ser Ile Pro Thr Leu Ile Leu Ser Pro
625                 630                 635                 640

Gly Glu Leu Glu Thr Thr Pro Ser Met Ala Thr Ser His Gly Ala Glu
                645                 650                 655
```

Ala Ser Ser Ala Val Pro Thr Pro Thr Val Ser Pro Gly Val Ser Gly
660 665 670

Val Val Thr Pro Leu Val Thr Ser Ser Arg Ala Val Thr Ser Thr Thr
675 680 685

Ile Pro Ile Leu Thr Leu Ser Ser Ser Glu Pro Glu Thr Thr Pro Ser
690 695 700

Met Ala Thr Ser His Gly Val Glu Ala Ser Ser Ala Val Leu Thr Val
705 710 715 720

Ser Pro Glu Val Pro Gly Met Val Thr Ser Leu Val Thr Ser Ser Arg
725 730 735

Ala Val Thr Ser Thr Thr Ile Pro Thr Leu Thr Ile Ser Ser Asp Glu
740 745 750

Pro Glu Thr Thr Thr Ser Leu Val Thr His Ser Glu Ala Lys Met Ile
755 760 765

Ser Ala Ile Pro Thr Leu Ala Val Ser Pro Thr Val Gln Gly Leu Val
770 775 780

Thr Ser Leu Val Thr Ser Ser Gly Ser Glu Thr Ser Ala Phe Ser Asn
785 790 795 800

Leu Thr Val Ala Ser Ser Gln Pro Glu Thr Ile Asp Ser Trp Val Ala
805 810 815

His Pro Gly Thr Glu Ala Ser Ser Val Val Pro Thr Leu Thr Val Ser
820 825 830

Thr Gly Glu Pro Phe Thr Asn Ile Ser Leu Val Thr His Pro Ala Glu
835 840 845

Ser Ser Ser Thr Leu Pro Arg Thr Thr Ser Arg Phe Ser His Ser Glu
850 855 860

Leu Asp Thr Met Pro Ser Thr Val Thr Ser Pro Glu Ala Glu Ser Ser
865 870 875 880

Ser Ala Ile Ser Thr Thr Ile Ser Pro Gly Ile Pro Gly Val Leu Thr
885 890 895

Ser Leu Val Thr Ser Ser Gly Arg Asp Ile Ser Ala Thr Phe Pro Thr

900 905 910

Val Pro Glu Ser Pro His Glu Ser Glu Ala Thr Ala Ser Trp Val Thr
915 920 925

His Pro Ala Val Thr Ser Thr Thr Val Pro Arg Thr Thr Pro Asn Tyr
930 935 940

Ser His Ser Glu Pro Asp Thr Thr Pro Ser Ile Ala Thr Ser Pro Gly
945 950 955 960

Ala Glu Ala Thr Ser Asp Phe Pro Thr Ile Thr Val Ser Pro Asp Val
965 970 975

Pro Asp Met Val Thr Ser Gln Val Thr Ser Ser Gly Thr Asp Thr Ser
980 985 990

Ile Thr Ile Pro Thr Leu Thr Leu Ser Ser Gly Glu Pro Glu Thr Thr
995 1000 1005

Thr Ser Phe Ile Thr Tyr Ser Glu Thr His Thr Ser Ser Ala Ile
1010 1015 1020

Pro Thr Leu Pro Val Ser Pro Gly Ala Ser Lys Met Leu Thr Ser
1025 1030 1035

Leu Val Ile Ser Ser Gly Thr Asp Ser Thr Thr Thr Phe Pro Thr
1040 1045 1050

Leu Thr Glu Thr Pro Tyr Glu Pro Glu Thr Thr Ala Ile Gln Leu
1055 1060 1065

Ile His Pro Ala Glu Thr Asn Thr Met Val Pro Arg Thr Thr Pro
1070 1075 1080

Lys Phe Ser His Ser Lys Ser Asp Thr Thr Leu Pro Val Ala Ile
1085 1090 1095

Thr Ser Pro Gly Pro Glu Ala Ser Ser Ala Val Ser Thr Thr Thr
1100 1105 1110

Ile Ser Pro Asp Met Ser Asp Leu Val Thr Ser Leu Val Pro Ser
1115 1120 1125

Ser Gly Thr Asp Thr Ser Thr Thr Phe Pro Thr Leu Ser Glu Thr
1130 1135 1140

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Pro Tyr  Glu Pro Glu Thr Thr  Ala Thr Trp Leu Thr  His Pro Ala
    1145                1150                1155

Glu Thr  Ser Thr Thr Val Ser  Gly Thr Ile Pro Asn  Phe Ser His
    1160                1165                1170

Arg Gly  Ser Asp Thr Ala Pro  Ser Met Val Thr Ser  Pro Gly Val
    1175                1180                1185

Asp Thr  Arg Ser Gly Val Pro  Thr Thr Thr Ile Pro  Pro Ser Ile
    1190                1195                1200

Pro Gly  Val Val Thr Ser Gln  Val Thr Ser Ser Ala  Thr Asp Thr
    1205                1210                1215

Ser Thr  Ala Ile Pro Thr Leu  Thr Pro Ser Pro Gly  Glu Pro Glu
    1220                1225                1230

Thr Thr  Ala Ser Ser Ala Thr  His Pro Gly Thr Gln  Thr Gly Phe
    1235                1240                1245

Thr Val  Pro Ile Arg Thr Val  Pro Ser Ser Glu Pro  Asp Thr Met
    1250                1255                1260

Ala Ser  Trp Val Thr His Pro  Pro Gln Thr Ser Thr  Pro Val Ser
    1265                1270                1275

Arg Thr  Thr Ser Ser Phe Ser  His Ser Ser Pro Asp  Ala Thr Pro
    1280                1285                1290

Val Met  Ala Thr Ser Pro Arg  Thr Glu Ala Ser Ser  Ala Val Leu
    1295                1300                1305

Thr Thr  Ile Ser Pro Gly Ala  Pro Glu Met Val Thr  Ser Gln Ile
    1310                1315                1320

Thr Ser  Ser Gly Ala Ala Thr  Ser Thr Thr Val Pro  Thr Leu Thr
    1325                1330                1335

His Ser  Pro Gly Met Pro Glu  Thr Thr Ala Leu Leu  Ser Thr His
    1340                1345                1350

Pro Arg  Thr Glu Thr Ser Lys  Thr Phe Pro Ala Ser  Thr Val Phe
    1355                1360                1365

Pro Gln  Val Ser Glu Thr Thr  Ala Ser Leu Thr Ile  Arg Pro Gly
    1370                1375                1380
```

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Ala Glu  Thr Ser Thr Ala Leu  Pro Thr Gln Thr Thr  Ser Ser Leu
    1385                 1390                 1395

Phe Thr  Leu Leu Val Thr Gly  Thr Ser Arg Val Asp  Leu Ser Pro
    1400                 1405                 1410

Thr Ala  Ser Pro Gly Val Ser  Ala Lys Thr Ala Pro  Leu Ser Thr
    1415                 1420                 1425

His Pro  Gly Thr Glu Thr Ser  Thr Met Ile Pro Thr  Ser Thr Leu
    1430                 1435                 1440

Ser Leu  Gly Leu Leu Glu Thr  Thr Gly Leu Leu Ala  Thr Ser Ser
    1445                 1450                 1455

Ser Ala  Glu Thr Ser Thr Ser  Thr Leu Thr Leu Thr  Val Ser Pro
    1460                 1465                 1470

Ala Val  Ser Gly Leu Ser Ser  Ala Ser Ile Thr Thr  Asp Lys Pro
    1475                 1480                 1485

Gln Thr  Val Thr Ser Trp Asn  Thr Glu Thr Ser Pro  Ser Val Thr
    1490                 1495                 1500

Ser Val  Gly Pro Pro Glu Phe  Ser Arg Thr Val Thr  Gly Thr Thr
    1505                 1510                 1515

Met Thr  Leu Ile Pro Ser Glu  Met Pro Thr Pro Pro  Lys Thr Ser
    1520                 1525                 1530

His Gly  Glu Gly Val Ser Pro  Thr Thr Ile Leu Arg  Thr Thr Met
    1535                 1540                 1545

Val Glu  Ala Thr Asn Leu Ala  Thr Thr Gly Ser Ser  Pro Thr Val
    1550                 1555                 1560

Ala Lys  Thr Thr Thr Thr Phe  Asn Thr Leu Ala Gly  Ser Leu Phe
    1565                 1570                 1575

Thr Pro  Leu Thr Thr Pro Gly  Met Ser Thr Leu Ala  Ser Glu Ser
    1580                 1585                 1590

Val Thr  Ser Arg Thr Ser Tyr  Asn His Arg Ser Trp  Ile Ser Thr
    1595                 1600                 1605

Thr Ser  Ser Tyr Asn Arg Arg  Tyr Trp Thr Pro Ala  Thr Ser Thr
    1610                 1615                 1620
```

```
Pro Val  Thr Ser Thr Phe Ser  Pro Gly Ile Ser Thr  Ser Ser Ile
    1625                 1630                 1635

Pro Ser  Ser Thr Ala Ala Thr  Val Pro Phe Met Val  Pro Phe Thr
    1640                 1645                 1650

Leu Asn  Phe Thr Ile Thr Asn  Leu Gln Tyr Glu Glu  Asp Met Arg
    1655                 1660                 1665

His Pro  Gly Ser Arg Lys Phe  Asn Ala Thr Glu Arg  Glu Leu Gln
    1670                 1675                 1680

Gly Leu  Leu Lys Pro Leu Phe  Arg Asn Ser Ser Leu  Glu Tyr Leu
    1685                 1690                 1695

Tyr Ser  Gly Cys Arg Leu Ala  Ser Leu Arg Pro Glu  Lys Asp Ser
    1700                 1705                 1710

Ser Ala  Met Ala Val Asp Ala  Ile Cys Thr His Arg  Pro Asp Pro
    1715                 1720                 1725

Glu Asp  Leu Gly Leu Asp Arg  Glu Arg Leu Tyr Trp  Glu Leu Ser
    1730                 1735                 1740

Asn Leu  Thr Asn Gly Ile Gln  Glu Leu Gly Pro Tyr  Thr Leu Asp
    1745                 1750                 1755

Arg Asn  Ser Leu Tyr Val Asn  Gly Phe Thr His Arg  Ser Ser Met
    1760                 1765                 1770

Pro Thr  Thr Ser Thr Pro Gly  Thr Ser Thr Val Asp  Val Gly Thr
    1775                 1780                 1785

Ser Gly  Thr Pro Ser Ser Ser  Pro Ser Pro Thr
    1790                 1795
```

<210> 150
<211> 156
<212> PRT
<213> Homo sapiens

<400> 150

```
Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Phe Asn Phe Thr Ile Thr
1               5                  10                  15

Asn Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe
            20                  25                  30
```

```
Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys
        35                  40                  45

Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu
    50                  55                  60

Arg Pro Glu Lys His Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr
65                  70                  75                  80

His Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr
                85                  90                  95

Trp Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr
            100                 105                 110

Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Arg Ser
        115                 120                 125

Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala
    130                 135                 140

Thr Ser Gly Thr Pro Ser Ser Leu Pro Lys Leu Thr
145                 150                 155


<210>  151
<211>  507
<212>  DNA
<213>  Homo sapiens


<220>
<221>  CDS
<222>  (1)..(507)

<400>  151
atg aga gga tcg cat cac cat cac cat cac gga tcc atg ggc cac aca       48
Met Arg Gly Ser His His His His His His Gly Ser Met Gly His Thr
1               5                   10                  15

gag cct ggc cct ctc ctg ata cca ttc act ttc aac ttt acc atc acc       96
Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Phe Asn Phe Thr Ile Thr
            20                  25                  30

aac ctg cat tat gag gaa aac atg caa cac cct ggt tcc agg aag ttc      144
Asn Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe
        35                  40                  45

aac acc acg gag agg gtt ctg cag ggt ctg ctc aag ccc ttg ttc aag      192
Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys
    50                  55                  60

aac acc agt gtt ggc cct ctg tac tct ggc tgc aga ctg acc ttg ctc      240
Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu
```

65 70 75 80

aga cct gag aag cat gag gca gcc act gga gtg gac acc atc tgt acc 288
Arg Pro Glu Lys His Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr
85 90 95

cac cgc gtt gat ccc atc gga cct gga ctg gac aga gag cgg cta tac 336
His Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr
100 105 110

tgg gag ctg agc cag ctg acc aac agc atc aca gag ctg gga ccc tac 384
Trp Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr
115 120 125

acc ctg gac agg gac agt ctc tat gtc aat ggc ttc aac cct cgg agc 432
Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Arg Ser
130 135 140

tct gtg cca acc acc agc act cct ggg acc tcc aca gtg cac ctg gca 480
Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala
145 150 155 160

acc tct ggg act cca tcc tcc ctg cct 507
Thr Ser Gly Thr Pro Ser Ser Leu Pro
165

<210> 152
<211> 169
<212> PRT
<213> Homo sapiens

<400> 152

Met Arg Gly Ser His His His His His His Gly Ser Met Gly His Thr
1 5 10 15

Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Phe Asn Phe Thr Ile Thr
20 25 30

Asn Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe
35 40 45

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys
50 55 60

Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu
65 70 75 80

Arg Pro Glu Lys His Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr
85 90 95

His Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr
100 105 110

Trp Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr

115 120 125

Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Arg Ser
130 135 140

Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala
145 150 155 160

Thr Ser Gly Thr Pro Ser Ser Leu Pro
165

<210> 153
<211> 507
<212> DNA
<213> Homo sapiens

<400> 153
aggcagggag gatggagtcc cagaggttgc caggtgcact gtggaggtcc caggagtgct 60

ggtggttggc acagagctcc gagggttgaa gccattgaca tagagactgt ccctgtccag 120

ggtgtagggt cccagctctg tgatgctgtt ggtcagctgg ctcagctccc agtatagccg 180

ctctctgtcc agtccaggtc cgatgggatc aacgcggtgg gtacagatgg tgtccactcc 240

agtggctgcc tcatgcttct caggtctgag caaggtcagt ctgcagccag agtacagagg 300

gccaacactg gtgttcttga acaagggctt gagcagaccc tgcagaaccc tctccgtggt 360

gttgaacttc ctggaaccag ggtgttgcat gttttcctca taatgcaggt tggtgatggt 420

aaagttgaaa gtgaatggta tcaggagagg gccaggctct gtgtggccca tggatccgtg 480

atggtgatgg tgatgcgatc ctctcat 507

<210> 154
<211> 9
<212> PRT
<213> Homo sapiens

<400> 154

Arg Leu Tyr Trp Glu Leu Ser Gln Leu
1 5

<210> 155
<211> 9
<212> PRT
<213> Homo sapiens

<400> 155

Thr Leu Asp Arg Asp Ser Leu Tyr Val
1 5

<210> 156

<211> 9
<212> PRT
<213> Homo sapiens

<400> 156

Val Leu Gln Gly Leu Leu Lys Pro Leu
1 5

<210> 157
<211> 9
<212> PRT
<213> Homo sapiens

<400> 157

Gln Leu Thr Asn Ser Ile Thr Glu Leu
1 5

<210> 158
<211> 780
<212> PRT
<213> Homo sapiens

<400> 158

Ala Thr Val Pro Phe Met Val Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe
20 25 30

Asn Ala Thr Glu Arg Glu Leu Gln Gly Leu Leu Lys Pro Leu Phe Arg
35 40 45

Asn Ser Ser Leu Glu Tyr Leu Tyr Ser Gly Cys Arg Leu Ala Ser Leu
50 55 60

Arg Pro Glu Lys Asp Ser Ser Ala Met Ala Val Asp Ala Ile Cys Thr
65 70 75 80

His Arg Pro Asp Pro Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr
85 90 95

Trp Glu Leu Ser Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr
100 105 110

Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser
115 120 125

Ser Met Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Val Gly
130 135 140

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Thr Ser Gly Thr Pro Ser Ser Ser Pro Ser Pro Thr Ala Ala Gly Pro
145                 150                 155                 160

Leu Leu Met Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr
                165                 170                 175

Glu Glu Asp Met Arg Arg Thr Gly Ser Arg Lys Phe Asn Thr Met Glu
            180                 185                 190

Ser Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr Ser Val
        195                 200                 205

Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys
    210                 215                 220

Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu Asp
225                 230                 235                 240

Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu Ser
                245                 250                 255

Lys Leu Thr Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr Leu Asp Arg
            260                 265                 270

Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln Ser Ser Val Ser Thr
        275                 280                 285

Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Arg Thr Ser Gly Thr
    290                 295                 300

Pro Ser Ser Leu Ser Ser Pro Thr Ile Met Ala Gly Pro Leu Leu Val
305                 310                 315                 320

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Gly Glu Asp
                325                 330                 335

Met Gly His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu
            340                 345                 350

Gln Gly Leu Leu Gly Pro Ile Phe Lys Asn Thr Ser Val Gly Pro Leu
        355                 360                 365

Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Ser Glu Lys Asp Gly Ala
    370                 375                 380

Ala Thr Gly Val Asp Ala Ile Cys Ile His His Leu Asp Pro Lys Ser
385                 390                 395                 400
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Pro Gly Leu Asn Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr
405 410 415

Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu
420 425 430

Tyr Val Asn Gly Phe Thr His Arg Thr Ser Val Pro Thr Ser Ser Thr
435 440 445

Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Phe Ser
450 455 460

Leu Pro Ser Pro Ala Thr Ala Gly Pro Leu Leu Val Leu Phe Thr Leu
465 470 475 480

Asn Phe Thr Ile Thr Asn Leu Lys Tyr Glu Glu Asp Met His Arg Pro
485 490 495

Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Thr Leu Leu
500 505 510

Gly Pro Met Phe Lys Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys
515 520 525

Arg Leu Thr Leu Leu Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly Val
530 535 540

Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asp
545 550 555 560

Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys
565 570 575

Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly
580 585 590

Phe Thr His Trp Ile Pro Val Pro Thr Ser Ser Thr Pro Gly Thr Ser
595 600 605

Thr Val Asp Leu Gly Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr
610 615 620

Ala Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr
625 630 635 640

Asn Leu Gln Tyr Glu Glu Asp Met His His Pro Gly Ser Arg Lys Phe

645 650 655

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe Lys
660 665 670

Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu
675 680 685

Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr
690 695 700

His Arg Leu Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln Leu Tyr
705 710 715 720

Trp Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr
725 730 735

Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln Thr
740 745 750

Ser Ala Pro Asn Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly
755 760 765

Thr Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr
770 775 780

<210> 159
<211> 780
<212> PRT
<213> Homo sapiens

<400> 159

Ser Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His His Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe Lys
35 40 45

Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu
50 55 60

Arg Pro Glu Lys Asn Gly Ala Ala Thr Gly Met Asp Ala Ile Cys Ser
65 70 75 80

His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr

85 90 95

Trp Glu Leu Ser Gln Leu Thr His Gly Ile Lys Glu Leu Gly Pro Tyr
100 105 110

Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser
115 120 125

Ser Val Ala Pro Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly
130 135 140

Thr Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Thr Ala Val Pro
145 150 155 160

Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr
165 170 175

Gly Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu
180 185 190

Arg Val Leu Gln Gly Leu Leu Gly Pro Leu Phe Lys Asn Ser Ser Val
195 200 205

Gly Pro Leu Tyr Ser Gly Cys Arg Leu Ile Ser Leu Arg Ser Glu Lys
210 215 220

Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His His Leu Asn
225 230 235 240

Pro Gln Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Gln Leu Ser
245 250 255

Gln Met Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg
260 265 270

Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Gly Leu Thr
275 280 285

Thr Ser Thr Pro Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr
290 295 300

Pro Ser Pro Val Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Val Pro
305 310 315 320

Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met
325 330 335

```
His Arg Pro Gly Ser Arg Lys Phe Asn Ala Thr Glu Arg Val Leu Gln
            340                 345                 350

Gly Leu Leu Ser Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu Tyr
        355                 360                 365

Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala Ala
    370                 375                 380

Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg Pro
385                 390                 395                 400

Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His
                405                 410                 415

Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu Tyr
            420                 425                 430

Val Asn Gly Phe Thr His Gln Asn Ser Val Pro Thr Thr Ser Thr Pro
        435                 440                 445

Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser Phe
    450                 455                 460

Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Phe Asn
465                 470                 475                 480

Phe Thr Ile Thr Asn Leu His Tyr Glu Glu Asn Met Gln His Pro Gly
                485                 490                 495

Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Lys
            500                 505                 510

Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg
        515                 520                 525

Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Gly Met Asp
    530                 535                 540

Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg Pro Gly Leu Asp Arg
545                 550                 555                 560

Glu Gln Leu Tyr Cys Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu
                565                 570                 575

Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe
            580                 585                 590
```

Thr His Gln Asn Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr
595 600 605

Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser Phe Pro Gly His Thr
610 615 620

Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Phe Asn Phe Thr Ile Thr
625 630 635 640

Asn Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe
645 650 655

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys
660 665 670

Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu
675 680 685

Arg Pro Glu Lys His Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr
690 695 700

His Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr
705 710 715 720

Trp Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr
725 730 735

Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Arg Ser
740 745 750

Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala
755 760 765

Thr Ser Gly Thr Pro Ser Ser Leu Pro Gly His Thr
770 775 780

<210> 160
<211> 624
<212> PRT
<213> Homo sapiens

<400> 160

Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Arg Phe
20 25 30

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Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Thr Pro Leu Phe Lys
        35                  40                  45

Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu
    50                  55                  60

Arg Pro Glu Lys Gln Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr
65                  70                  75                  80

His Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr
                85                  90                  95

Trp Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr
            100                 105                 110

Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Trp Ser
        115                 120                 125

Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala
    130                 135                 140

Thr Ser Gly Thr Pro Ser Ser Leu Pro Gly His Thr Ala Pro Val Pro
145                 150                 155                 160

Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr Asp Leu His Tyr
                165                 170                 175

Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu
            180                 185                 190

Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val
        195                 200                 205

Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys
    210                 215                 220

His Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr Leu Arg Leu Asp
225                 230                 235                 240

Pro Thr Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser
                245                 250                 255

Gln Leu Thr Asn Ser Val Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg
            260                 265                 270

Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro Thr
        275                 280                 285
```

Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly Thr
290 295 300

Pro Ala Ser Leu Pro Gly His Thr Ala Pro Gly Pro Leu Leu Val Pro
305 310 315 320

Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met
325 330 335

Arg His Pro Gly Ser Arg Lys Phe Ser Thr Thr Glu Arg Val Leu Gln
340 345 350

Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu Tyr
355 360 365

Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala Ala
370 375 380

Thr Arg Val Asp Ala Val Cys Thr His Arg Pro Asp Pro Lys Ser Pro
385 390 395 400

Gly Leu Asp Arg Glu Arg Leu Tyr Trp Lys Leu Ser Gln Leu Thr His
405 410 415

Gly Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg His Ser Leu Tyr
420 425 430

Val Asn Gly Phe Thr His Gln Ser Ser Met Thr Thr Thr Arg Thr Pro
435 440 445

Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg Thr Pro Ala Ser Leu
450 455 460

Ser Gly Pro Thr Thr Ala Ser Pro Leu Leu Val Leu Phe Thr Ile Asn
465 470 475 480

Phe Thr Ile Thr Asn Gln Arg Tyr Glu Glu Asn Met His His Pro Gly
485 490 495

Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Arg
500 505 510

Pro Val Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg
515 520 525

Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala Ala Thr Lys Val Asp

530 535 540

Ala Ile Cys Thr Tyr Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg
545 550 555 560

Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu
565 570 575

Leu Gly Pro Tyr Thr Gln Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe
580 585 590

Thr His Arg Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr Ser Ala
595 600 605

Val His Leu Glu Thr Ser Gly Thr Pro Ala Ser Leu Pro Gly His Thr
610 615 620

<210> 161
<211> 468
<212> PRT
<213> Homo sapiens

<400> 161

Ala Thr Gly Pro Val Leu Leu Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Met Pro Leu Phe Lys
35 40 45

Asn Thr Ser Val Ser Ser Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu
50 55 60

Arg Pro Glu Lys Asp Gly Ala Ala Thr Arg Val Asp Ala Val Cys Thr
65 70 75 80

His Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Arg Leu Tyr
85 90 95

Trp Lys Leu Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro Tyr
100 105 110

Thr Leu Asp Arg His Ser Leu Tyr Val Asn Gly Phe Thr His Gln Ser
115 120 125

Ser Met Thr Thr Thr Arg Thr Pro Asp Thr Ser Thr Met His Leu Ala

130 135 140

Thr Ser Arg Thr Pro Ala Ser Leu Ser Gly Pro Thr Thr Ala Ser Pro
145 150 155 160

Leu Leu Val Leu Phe Thr Ile Asn Phe Thr Ile Thr Asn Leu Arg Tyr
165 170 175

Glu Glu Asn Met His His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu
180 185 190

Arg Val Leu Gln Gly Leu Leu Arg Pro Val Phe Lys Asn Thr Ser Val
195 200 205

Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys
210 215 220

Asp Gly Ala Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro Asp
225 230 235 240

Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser
245 250 255

Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Gln Asp Arg
260 265 270

Asp Ser Leu Tyr Asn Val Gly Phe Thr Gln Arg Ser Ser Val Pro Thr
275 280 285

Thr Ser Val Pro Gly Thr Pro Thr Val Asp Leu Gly Thr Ser Gly Thr
290 295 300

Pro Val Ser Lys Pro Gly Pro Ser Ala Ala Ser Pro Leu Leu Val Leu
305 310 315 320

Phe Thr Leu Asn Gly Thr Ile Thr Asn Leu Arg Tyr Glu Glu Asn Met
325 330 335

Gln His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln
340 345 350

Gly Leu Leu Arg Ser Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr
355 360 365

Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Thr Ala
370 375 380

Thr Gly Val Asp Ala Ile Cys Thr His His Pro Asp Pro Lys Ser Pro
385 390 395 400

Arg Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His
405 410 415

Asn Ile Thr Glu Leu Gly His Tyr Ala Leu Asp Asn Asp Ser Leu Phe
420 425 430

Val Asn Gly Phe Thr His Arg Ser Ser Val Ser Thr Thr Ser Thr Pro
435 440 445

Gly Thr Pro Thr Val Tyr Leu Gly Ala Ser Lys Thr Pro Ala Ser Ile
450 455 460

Phe Gly Pro Ser
465

<210> 162
<211> 11721
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (1)..(11721)
<223> Any "X" = any amino acid

<400> 162

Met Glu His Ile Thr Lys Ile Pro Asn Glu Ala Ala His Arg Gly Thr
1 5 10 15

Ile Arg Pro Val Lys Gly Pro Gln Thr Ser Thr Ser Pro Ala Ser Pro
20 25 30

Lys Gly Leu His Thr Gly Gly Thr Lys Arg Met Glu Thr Thr Thr Thr
35 40 45

Ala Leu Lys Thr Thr Thr Thr Ala Leu Lys Thr Thr Ser Arg Ala Thr
50 55 60

Leu Thr Thr Ser Val Tyr Thr Pro Thr Leu Gly Thr Leu Thr Pro Leu
65 70 75 80

Asn Ala Ser Arg Gln Met Ala Ser Thr Ile Leu Thr Glu Met Met Ile
85 90 95

Thr Thr Pro Tyr Val Phe Pro Asp Val Pro Glu Thr Thr Ser Ser Leu
100 105 110

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Ala Thr Ser Leu Gly Ala Glu Thr Ser Thr Ala Leu Pro Arg Thr Thr
        115                 120                 125

Pro Ser Val Leu Asn Arg Glu Ser Glu Thr Thr Ala Ser Leu Val Ser
    130                 135                 140

Arg Ser Gly Ala Glu Arg Ser Pro Val Ile Gln Thr Leu Asp Val Ser
145                 150                 155                 160

Ser Ser Glu Pro Asp Thr Thr Ala Ser Trp Val Ile His Pro Ala Glu
                165                 170                 175

Thr Ile Pro Thr Val Ser Lys Thr Thr Pro Asn Phe Phe His Ser Glu
            180                 185                 190

Leu Asp Thr Val Ser Ser Thr Ala Thr Ser His Gly Ala Asp Val Ser
        195                 200                 205

Ser Ala Ile Pro Thr Asn Ile Ser Pro Ser Glu Leu Asp Ala Leu Thr
    210                 215                 220

Pro Leu Val Thr Ile Ser Gly Thr Asp Thr Ser Thr Thr Phe Pro Thr
225                 230                 235                 240

Leu Thr Lys Ser Pro His Glu Thr Glu Thr Arg Thr Thr Trp Leu Thr
                245                 250                 255

His Pro Ala Glu Thr Ser Ser Thr Ile Pro Arg Thr Ile Pro Asn Phe
            260                 265                 270

Ser His His Glu Ser Asp Ala Thr Pro Ser Ile Ala Thr Ser Pro Gly
        275                 280                 285

Ala Glu Thr Ser Ser Ala Ile Pro Ile Met Thr Val Ser Pro Gly Ala
    290                 295                 300

Glu Asp Leu Val Thr Ser Gln Val Thr Ser Ser Gly Thr Asp Arg Asn
305                 310                 315                 320

Met Thr Ile Pro Thr Leu Thr Leu Ser Pro Gly Glu Pro Lys Thr Ile
                325                 330                 335

Ala Ser Leu Val Thr His Pro Glu Ala Gln Thr Ser Ser Ala Ile Pro
            340                 345                 350

Thr Ser Thr Ile Ser Pro Ala Val Ser Arg Leu Val Thr Ser Met Val
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        355                 360                 365

Thr Ser Leu Ala Ala Lys Thr Ser Thr Thr Asn Arg Ala Leu Thr Asn
    370                 375                 380

Ser Pro Gly Glu Pro Ala Thr Thr Val Ser Leu Val Thr His Pro Ala
385                 390                 395                 400

Gln Thr Ser Pro Thr Val Pro Trp Thr Thr Ser Ile Phe Phe His Ser
                405                 410                 415

Lys Ser Asp Thr Thr Pro Ser Met Thr Thr Ser His Gly Ala Glu Ser
            420                 425                 430

Ser Ser Ala Val Pro Thr Pro Thr Val Ser Thr Glu Val Pro Gly Val
        435                 440                 445

Val Thr Pro Leu Val Thr Ser Ser Arg Ala Val Ile Ser Thr Thr Ile
    450                 455                 460

Pro Ile Leu Thr Leu Ser Pro Gly Glu Pro Glu Thr Thr Pro Ser Met
465                 470                 475                 480

Ala Thr Ser His Gly Glu Glu Ala Ser Ser Ala Ile Pro Thr Pro Thr
                485                 490                 495

Val Ser Pro Gly Val Pro Gly Val Val Thr Ser Leu Val Thr Ser Ser
            500                 505                 510

Arg Ala Val Thr Ser Thr Thr Ile Pro Ile Leu Thr Phe Ser Leu Gly
        515                 520                 525

Glu Pro Glu Thr Thr Pro Ser Met Ala Thr Ser His Gly Thr Glu Ala
    530                 535                 540

Gly Ser Ala Val Pro Thr Val Leu Pro Glu Val Pro Gly Met Val Thr
545                 550                 555                 560

Ser Leu Val Ala Ser Ser Arg Ala Val Thr Ser Thr Thr Leu Pro Thr
                565                 570                 575

Leu Thr Leu Ser Pro Gly Glu Pro Glu Thr Thr Pro Ser Met Ala Thr
            580                 585                 590

Ser His Gly Ala Glu Ala Ser Ser Thr Val Pro Thr Val Ser Pro Glu
        595                 600                 605
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Val Pro Gly Val Val Thr Ser Leu Val Thr Ser Ser Ser Gly Val Asn
    610                 615                 620

Ser Thr Ser Ile Pro Thr Leu Ile Leu Ser Pro Gly Glu Leu Glu Thr
625                 630                 635                 640

Thr Pro Ser Met Ala Thr Ser His Gly Ala Glu Ala Ser Ser Ala Val
                645                 650                 655

Pro Thr Pro Thr Val Ser Pro Gly Val Ser Gly Val Val Thr Pro Leu
            660                 665                 670

Val Thr Ser Ser Arg Ala Val Thr Ser Thr Thr Ile Pro Ile Leu Thr
        675                 680                 685

Leu Ser Ser Ser Glu Pro Glu Thr Thr Pro Ser Met Ala Thr Ser His
    690                 695                 700

Gly Val Glu Ala Ser Ser Ala Val Leu Thr Val Ser Pro Glu Val Pro
705                 710                 715                 720

Gly Met Val Thr Ser Leu Val Thr Ser Ser Arg Ala Val Thr Ser Thr
                725                 730                 735

Thr Ile Pro Thr Leu Thr Ile Ser Ser Asp Glu Pro Glu Thr Thr Thr
            740                 745                 750

Ser Leu Val Thr His Ser Glu Ala Lys Met Ile Ser Ala Ile Pro Thr
        755                 760                 765

Leu Ala Val Ser Pro Thr Val Gln Gly Leu Val Thr Ser Leu Val Thr
    770                 775                 780

Ser Ser Gly Ser Glu Thr Ser Ala Phe Ser Asn Leu Thr Val Ala Ser
785                 790                 795                 800

Ser Gln Pro Glu Thr Ile Asp Ser Trp Val Ala His Pro Gly Thr Glu
                805                 810                 815

Ala Ser Ser Val Val Pro Thr Leu Thr Val Ser Thr Gly Glu Pro Phe
            820                 825                 830

Thr Asn Ile Ser Leu Val Thr His Pro Ala Glu Ser Ser Ser Thr Leu
        835                 840                 845

Pro Arg Thr Thr Ser Arg Phe Ser His Ser Glu Leu Asp Thr Met Pro
    850                 855                 860
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Ser Thr Val Thr Ser Pro Glu Ala Glu Ser Ser Ser Ala Ile Ser Thr
865                 870                 875                 880

Thr Ile Ser Pro Gly Ile Pro Gly Val Leu Thr Ser Leu Val Thr Ser
                885                 890                 895

Ser Gly Arg Asp Ile Ser Ala Thr Phe Pro Thr Val Pro Glu Ser Pro
            900                 905                 910

His Glu Ser Glu Ala Thr Ala Ser Trp Val Thr His Pro Ala Val Thr
        915                 920                 925

Ser Thr Thr Val Pro Arg Thr Thr Pro Asn Tyr Ser His Ser Glu Pro
    930                 935                 940

Asp Thr Thr Pro Ser Ile Ala Thr Ser Pro Gly Ala Glu Ala Thr Ser
945                 950                 955                 960

Asp Phe Pro Thr Ile Thr Val Ser Pro Asp Val Pro Asp Met Val Thr
                965                 970                 975

Ser Gln Val Thr Ser Ser Gly Thr Asp Thr Ser Ile Thr Ile Pro Thr
            980                 985                 990

Leu Thr Leu Ser Ser Gly Glu Pro  Glu Thr Thr Thr Ser  Phe Ile Thr
        995                 1000                1005

Tyr Ser  Glu Thr His Thr Ser  Ser Ala Ile Pro Thr  Leu Pro Val
    1010                1015                1020

Ser Pro  Gly Ala Ser Lys Met  Leu Thr Ser Leu Val  Ile Ser Ser
    1025                1030                1035

Gly Thr  Asp Ser Thr Thr Thr  Phe Pro Thr Leu Thr  Glu Thr Pro
    1040                1045                1050

Tyr Glu  Pro Glu Thr Thr Ala  Ile Gln Leu Ile His  Pro Ala Glu
    1055                1060                1065

Thr Asn  Thr Met Val Pro Arg  Thr Thr Pro Lys Phe  Ser His Ser
    1070                1075                1080

Lys Ser  Asp Thr Thr Leu Pro  Val Ala Ile Thr Ser  Pro Gly Pro
    1085                1090                1095

Glu Ala  Ser Ser Ala Val Ser  Thr Thr Thr Ile Ser  Pro Asp Met
    1100                1105                1110
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Ser Asp Leu Val Thr Ser Leu Val Pro Ser Ser Gly Thr Asp Thr
1115 1120 1125

Ser Thr Thr Phe Pro Thr Leu Ser Glu Thr Pro Tyr Glu Pro Glu
1130 1135 1140

Thr Thr Ala Thr Trp Leu Thr His Pro Ala Glu Thr Ser Thr Thr
1145 1150 1155

Val Ser Gly Thr Ile Pro Asn Phe Ser His Arg Gly Ser Asp Thr
1160 1165 1170

Ala Pro Ser Met Val Thr Ser Pro Gly Val Asp Thr Arg Ser Gly
1175 1180 1185

Val Pro Thr Thr Thr Ile Pro Pro Ser Ile Pro Gly Val Val Thr
1190 1195 1200

Ser Gln Val Thr Ser Ser Ala Thr Asp Thr Ser Thr Ala Ile Pro
1205 1210 1215

Thr Leu Thr Pro Ser Pro Gly Glu Pro Glu Thr Thr Ala Ser Ser
1220 1225 1230

Ala Thr His Pro Gly Thr Gln Thr Gly Phe Thr Val Pro Ile Arg
1235 1240 1245

Thr Val Pro Ser Ser Glu Pro Asp Thr Met Ala Ser Trp Val Thr
1250 1255 1260

His Pro Pro Gln Thr Ser Thr Pro Val Ser Arg Thr Thr Ser Ser
1265 1270 1275

Phe Ser His Ser Ser Pro Asp Ala Thr Pro Val Met Ala Thr Ser
1280 1285 1290

Pro Arg Thr Glu Ala Ser Ser Ala Val Leu Thr Thr Ile Ser Pro
1295 1300 1305

Gly Ala Pro Glu Met Val Thr Ser Gln Ile Thr Ser Ser Gly Ala
1310 1315 1320

Ala Thr Ser Thr Thr Val Pro Thr Leu Thr His Ser Pro Gly Met
1325 1330 1335

Pro Glu Thr Thr Ala Leu Leu Ser Thr His Pro Arg Thr Glu Thr

1340 1345 1350

Ser Lys Thr Phe Pro Ala Ser Thr Val Phe Pro Gln Val Ser Glu
1355 1360 1365

Thr Thr Ala Ser Leu Thr Ile Arg Pro Gly Ala Glu Thr Ser Thr
1370 1375 1380

Ala Leu Pro Thr Gln Thr Thr Ser Ser Leu Phe Thr Leu Leu Val
1385 1390 1395

Thr Gly Thr Ser Arg Val Asp Leu Ser Pro Thr Ala Ser Pro Gly
1400 1405 1410

Val Ser Ala Lys Thr Ala Pro Leu Ser Thr His Pro Gly Thr Glu
1415 1420 1425

Thr Ser Thr Met Ile Pro Thr Ser Thr Leu Ser Leu Gly Leu Leu
1430 1435 1440

Glu Thr Thr Gly Leu Leu Ala Thr Ser Ser Ser Ala Glu Thr Ser
1445 1450 1455

Thr Ser Thr Leu Thr Leu Thr Val Ser Pro Ala Val Ser Gly Leu
1460 1465 1470

Ser Ser Ala Ser Ile Thr Thr Asp Lys Pro Gln Thr Val Thr Ser
1475 1480 1485

Trp Asn Thr Glu Thr Ser Pro Ser Val Thr Ser Val Gly Pro Pro
1490 1495 1500

Glu Phe Ser Arg Thr Val Thr Gly Thr Thr Met Thr Leu Ile Pro
1505 1510 1515

Ser Glu Met Pro Thr Pro Pro Lys Thr Ser His Gly Glu Gly Val
1520 1525 1530

Ser Pro Thr Thr Ile Leu Arg Thr Thr Met Val Glu Ala Thr Asn
1535 1540 1545

Leu Ala Thr Thr Gly Ser Ser Pro Thr Val Ala Lys Thr Thr Thr
1550 1555 1560

Thr Phe Asn Thr Leu Ala Gly Ser Leu Phe Thr Pro Leu Thr Thr
1565 1570 1575

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Pro Gly  Met Ser Thr Leu Ala  Ser Glu Ser Val Thr  Ser Arg Thr
    1580                 1585                 1590

Ser Tyr  Asn His Arg Ser Trp  Ile Ser Thr Thr Ser  Ser Tyr Asn
    1595                 1600                 1605

Arg Arg  Tyr Trp Thr Pro Ala  Thr Ser Thr Pro Val  Thr Ser Thr
    1610                 1615                 1620

Phe Ser  Pro Gly Ile Ser Thr  Ser Ser Ile Pro Ser  Ser Thr Ala
    1625                 1630                 1635

Ala Thr  Val Pro Phe Met Val  Pro Phe Thr Leu Asn  Phe Thr Ile
    1640                 1645                 1650

Thr Asn  Leu Gln Tyr Glu Glu  Asp Met Arg His Pro  Gly Ser Arg
    1655                 1660                 1665

Lys Phe  Asn Ala Thr Glu Arg  Glu Leu Gln Gly Leu  Leu Lys Pro
    1670                 1675                 1680

Leu Phe  Arg Asn Ser Ser Leu  Glu Tyr Leu Tyr Ser  Gly Cys Arg
    1685                 1690                 1695

Leu Ala  Ser Leu Arg Pro Glu  Lys Asp Ser Ser Ala  Met Ala Val
    1700                 1705                 1710

Asp Ala  Ile Cys Thr His Arg  Pro Asp Pro Glu Asp  Leu Gly Leu
    1715                 1720                 1725

Asp Arg  Glu Arg Leu Tyr Trp  Glu Leu Ser Asn Leu  Thr Asn Gly
    1730                 1735                 1740

Ile Gln  Glu Leu Gly Pro Tyr  Thr Leu Asp Arg Asn  Ser Leu Tyr
    1745                 1750                 1755

Val Asn  Gly Phe Thr His Arg  Ser Ser Met Pro Thr  Thr Ser Thr
    1760                 1765                 1770

Pro Gly  Thr Ser Thr Val Asp  Val Gly Thr Ser Gly  Thr Pro Ser
    1775                 1780                 1785

Ser Ser  Pro Ser Pro Thr Ala  Ala Gly Pro Leu Leu  Met Pro Phe
    1790                 1795                 1800

Thr Leu  Asn Phe Thr Ile Thr  Asn Leu Gln Tyr Glu  Glu Asp Met
    1805                 1810                 1815
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Arg Arg  Thr Gly Ser Arg Lys  Phe Asn Thr Met Glu  Ser Val Leu
    1820                 1825                 1830

Gln Gly  Leu Leu Lys Pro Leu  Phe Lys Asn Thr Ser  Val Gly Pro
    1835                 1840                 1845

Leu Tyr  Ser Gly Cys Arg Leu  Thr Leu Leu Arg Pro  Glu Lys Asp
    1850                 1855                 1860

Gly Ala  Ala Thr Gly Val Asp  Ala Ile Cys Thr His  Arg Leu Asp
    1865                 1870                 1875

Pro Lys  Ser Pro Gly Leu Asn  Arg Glu Gln Leu Tyr  Trp Glu Leu
    1880                 1885                 1890

Ser Lys  Leu Thr Asn Asp Ile  Glu Glu Leu Gly Pro  Tyr Thr Leu
    1895                 1900                 1905

Asp Arg  Asn Ser Leu Tyr Val  Asn Gly Phe Thr His  Gln Ser Ser
    1910                 1915                 1920

Val Ser  Thr Thr Ser Thr Pro  Gly Thr Ser Thr Val  Asp Leu Arg
    1925                 1930                 1935

Thr Ser  Gly Thr Pro Ser Ser  Leu Ser Ser Pro Thr  Ile Met Ala
    1940                 1945                 1950

Ala Gly  Pro Leu Leu Val Pro  Phe Thr Leu Asn Phe  Thr Ile Thr
    1955                 1960                 1965

Asn Leu  Gln Tyr Gly Glu Asp  Met Gly His Pro Gly  Ser Arg Lys
    1970                 1975                 1980

Phe Asn  Thr Thr Glu Arg Val  Leu Gln Gly Leu Leu  Gly Pro Ile
    1985                 1990                 1995

Phe Lys  Asn Thr Ser Val Gly  Pro Leu Tyr Ser Gly  Cys Arg Leu
    2000                 2005                 2010

Thr Ser  Leu Arg Ser Glu Lys  Asp Gly Ala Ala Thr  Gly Val Asp
    2015                 2020                 2025

Ala Ile  Cys Ile His His Leu  Asp Pro Lys Ser Pro  Gly Leu Asn
    2030                 2035                 2040

Arg Glu  Arg Leu Tyr Trp Glu  Leu Ser Gln Leu Thr  Asn Gly Ile
    2045                 2050                 2055
```

Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val
2060 2065 2070

Asn Gly Phe Thr His Arg Thr Ser Val Pro Thr Ser Ser Thr Pro
2075 2080 2085

Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Phe Ser
2090 2095 2100

Leu Pro Ser Pro Ala Thr Ala Gly Pro Leu Leu Val Leu Phe Thr
2105 2110 2115

Leu Asn Phe Thr Ile Thr Asn Leu Lys Tyr Glu Glu Asp Met His
2120 2125 2130

Arg Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln
2135 2140 2145

Thr Leu Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly Leu Leu
2150 2155 2160

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Ser Glu Lys Asp Gly
2165 2170 2175

Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu Asp Pro
2180 2185 2190

Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser
2195 2200 2205

Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp
2210 2215 2220

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Trp Ile Pro Val
2225 2230 2235

Pro Thr Ser Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Ser
2240 2245 2250

Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Ala Ala Gly Pro Leu
2255 2260 2265

Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr
2270 2275 2280

Glu Glu Asp Met His His Pro Gly Ser Arg Lys Phe Asn Thr Thr

2285 2290 2295

Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe Lys Asn Thr
2300 2305 2310

Ser Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg
2315 2320 2325

Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr
2330 2335 2340

His Arg Leu Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln Leu
2345 2350 2355

Tyr Trp Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly
2360 2365 2370

Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr
2375 2380 2385

His Gln Thr Ser Ala Pro Asn Thr Ser Thr Pro Gly Thr Ser Thr
2390 2395 2400

Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro
2405 2410 2415

Thr Ser Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr
2420 2425 2430

Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro Gly Ser
2435 2440 2445

Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Lys
2450 2455 2460

Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys
2465 2470 2475

Arg Leu Thr Leu Leu Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly
2480 2485 2490

Val Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly
2495 2500 2505

Val Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn
2510 2515 2520

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Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu
    2525                2530                2535

Tyr Val Asn Gly Phe Thr His Gln Thr Ser Ala Pro Asn Thr Ser
    2540                2545                2550

Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro
    2555                2560                2565

Ser Ser Leu Pro Ser Pro Thr Ser Ala Gly Pro Leu Leu Val Pro
    2570                2575                2580

Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp
    2585                2590                2595

Met His His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val
    2600                2605                2610

Leu Gln Gly Leu Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly
    2615                2620                2625

Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys
    2630                2635                2640

Asn Gly Ala Ala Thr Gly Met Asp Ala Ile Cys Ser His Arg Leu
    2645                2650                2655

Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu
    2660                2665                2670

Leu Ser Gln Leu Thr His Gly Ile Lys Glu Leu Gly Pro Tyr Thr
    2675                2680                2685

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser
    2690                2695                2700

Ser Val Ala Pro Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu
    2705                2710                2715

Gly Thr Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Thr Ala
    2720                2725                2730

Val Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn
    2735                2740                2745

Leu Gln Tyr Gly Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe
    2750                2755                2760
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Asn Thr  Thr Glu Arg Val Leu  Gln Gly Leu Leu Gly  Pro Leu Phe
    2765                 2770                 2775

Lys Asn  Ser Ser Val Gly Pro  Leu Tyr Ser Gly Cys  Arg Leu Ile
    2780                 2785                 2790

Ser Leu  Arg Ser Glu Lys Asp  Gly Ala Ala Thr Gly  Val Asp Ala
    2795                 2800                 2805

Ile Cys  Thr His His Leu Asn  Pro Gln Ser Pro Gly  Leu Asp Arg
    2810                 2815                 2820

Glu Gln  Leu Tyr Trp Gln Leu  Ser Gln Met Thr Asn  Gly Ile Lys
    2825                 2830                 2835

Glu Leu  Gly Pro Tyr Thr Leu  Asp Arg Asn Ser Leu  Tyr Val Asn
    2840                 2845                 2850

Gly Phe  Thr His Arg Ser Ser  Gly Leu Thr Thr Ser  Thr Pro Trp
    2855                 2860                 2865

Thr Ser  Thr Val Asp Leu Gly  Thr Ser Gly Thr Pro  Ser Pro Val
    2870                 2875                 2880

Pro Ser  Pro Thr Thr Ala Gly  Pro Leu Leu Val Pro  Phe Thr Leu
    2885                 2890                 2895

Asn Phe  Thr Ile Thr Asn Leu  Gln Tyr Glu Glu Asp  Met His Arg
    2900                 2905                 2910

Pro Gly  Ser Arg Lys Phe Asn  Ala Thr Glu Arg Val  Leu Gln Gly
    2915                 2920                 2925

Leu Leu  Ser Pro Ile Phe Lys  Asn Ser Ser Val Gly  Pro Leu Tyr
    2930                 2935                 2940

Ser Gly  Cys Arg Leu Thr Ser  Leu Arg Pro Glu Lys  Asp Gly Ala
    2945                 2950                 2955

Ala Thr  Gly Met Asp Ala Val  Cys Leu Tyr His Pro  Asn Pro Lys
    2960                 2965                 2970

Arg Pro  Gly Leu Asp Arg Glu  Gln Leu Tyr Trp Glu  Leu Ser Gln
    2975                 2980                 2985

Leu Thr  His Asn Ile Thr Glu  Leu Gly Pro Tyr Ser  Leu Asp Arg
    2990                 2995                 3000
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Asp Ser  Leu Tyr Val Asn Gly  Phe Thr His Gln Asn  Ser Val Pro
    3005                 3010                 3015

Thr Thr  Ser Thr Pro Gly Thr  Ser Thr Val Tyr Trp  Ala Thr Thr
    3020                 3025                 3030

Gly Thr  Pro Ser Ser Phe Pro  Gly His Thr Glu Pro  Gly Pro Leu
    3035                 3040                 3045

Leu Ile  Pro Phe Thr Phe Asn  Phe Thr Ile Thr Asn  Leu His Tyr
    3050                 3055                 3060

Glu Glu  Asn Met Gln His Pro  Gly Ser Arg Lys Phe  Asn Thr Thr
    3065                 3070                 3075

Glu Arg  Val Leu Gln Gly Leu  Leu Lys Pro Leu Phe  Lys Asn Thr
    3080                 3085                 3090

Ser Val  Gly Pro Leu Tyr Ser  Gly Cys Arg Leu Thr  Ser Leu Arg
    3095                 3100                 3105

Pro Glu  Lys Asp Gly Ala Ala  Thr Gly Met Asp Ala  Val Cys Leu
    3110                 3115                 3120

Tyr His  Pro Asn Pro Lys Arg  Pro Gly Leu Asp Arg  Glu Gln Leu
    3125                 3130                 3135

Tyr Cys  Glu Leu Ser Gln Leu  Thr His Asn Ile Thr  Glu Leu Gly
    3140                 3145                 3150

Pro Tyr  Ser Leu Asp Arg Asp  Ser Leu Tyr Val Asn  Gly Phe Thr
    3155                 3160                 3165

His Gln  Asn Ser Val Pro Thr  Thr Ser Thr Pro Gly  Thr Ser Thr
    3170                 3175                 3180

Val Tyr  Trp Ala Thr Thr Gly  Thr Pro Ser Ser Phe  Pro Gly His
    3185                 3190                 3195

Thr Glu  Pro Gly Pro Leu Leu  Ile Pro Phe Thr Phe  Asn Phe Thr
    3200                 3205                 3210

Ile Thr  Asn Leu His Tyr Glu  Glu Asn Met Gln His  Pro Gly Ser
    3215                 3220                 3225

Arg Lys  Phe Asn Thr Thr Glu  Arg Val Leu Gln Gly  Leu Leu Lys
```

3230 3235 3240

Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys
3245 3250 3255

Arg Leu Thr Leu Leu Arg Pro Glu Lys His Glu Ala Ala Thr Gly
3260 3265 3270

Val Asp Thr Ile Cys Thr His Arg Val Asp Pro Ile Gly Pro Gly
3275 3280 3285

Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn
3290 3295 3300

Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu
3305 3310 3315

Tyr Val Asn Gly Phe Asn Pro Arg Ser Ser Val Pro Thr Thr Ser
3320 3325 3330

Thr Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser Gly Thr Pro
3335 3340 3345

Ser Ser Leu Pro Gly His Thr Ala Pro Val Pro Leu Leu Ile Pro
3350 3355 3360

Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu His Tyr Glu Glu Asn
3365 3370 3375

Met Gln His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val
3380 3385 3390

Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Gly
3395 3400 3405

Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys
3410 3415 3420

His Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Val
3425 3430 3435

Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Xaa Leu Tyr Trp Glu
3440 3445 3450

Leu Ser Xaa Leu Thr Xaa Xaa Ile Xaa Glu Leu Gly Pro Tyr Xaa
3455 3460 3465

```
Leu Asp  Arg Xaa Ser Leu Tyr  Val Asn Gly Phe Xaa  Xaa Xaa Xaa
    3470                 3475                 3480

Xaa Xaa  Xaa Xaa Thr Ser Thr  Pro Gly Thr Ser Xaa  Val Xaa Leu
    3485                 3490                 3495

Xaa Thr  Ser Gly Thr Pro Xaa  Xaa Xaa Pro Xaa Xaa  Thr Ser Ala
    3500                 3505                 3510

Gly Pro  Leu Leu Val Pro Phe  Thr Leu Asn Phe Thr  Ile Thr Asn
    3515                 3520                 3525

Leu Gln  Tyr Glu Glu Asp Met  His His Pro Gly Ser  Arg Lys Phe
    3530                 3535                 3540

Asn Thr  Thr Glu Arg Val Leu  Gln Gly Leu Leu Gly  Pro Met Phe
    3545                 3550                 3555

Lys Asn  Thr Ser Val Gly Leu  Leu Tyr Ser Gly Cys  Arg Leu Thr
    3560                 3565                 3570

Leu Leu  Arg Pro Glu Lys Asn  Gly Ala Ala Thr Gly  Met Asp Ala
    3575                 3580                 3585

Ile Cys  Ser His Arg Leu Asp  Pro Lys Ser Pro Gly  Leu Asp Arg
    3590                 3595                 3600

Glu Gln  Leu Tyr Trp Glu Leu  Ser Gln Leu Thr His  Gly Ile Lys
    3605                 3610                 3615

Glu Leu  Gly Pro Tyr Thr Leu  Asp Arg Asn Ser Leu  Tyr Val Asn
    3620                 3625                 3630

Gly Phe  Thr His Arg Ser Ser  Val Ala Pro Thr Ser  Thr Pro Gly
    3635                 3640                 3645

Thr Ser  Thr Val Asp Leu Gly  Thr Ser Gly Thr Pro  Ser Ser Leu
    3650                 3655                 3660

Pro Ser  Pro Thr Thr Ala Val  Pro Leu Leu Val Pro  Phe Thr Leu
    3665                 3670                 3675

Asn Phe  Thr Ile Thr Asn Leu  Gln Tyr Gly Glu Asp  Met Arg His
    3680                 3685                 3690

Pro Gly  Ser Arg Lys Phe Asn  Thr Thr Glu Arg Val  Leu Gln Gly
    3695                 3700                 3705
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```
Leu Leu  Gly Pro Leu Phe Lys  Asn Ser Ser Val Gly  Pro Leu Tyr
    3710                 3715                 3720

Ser Gly  Cys Arg Leu Ile Ser  Leu Arg Ser Glu Lys  Asp Gly Ala
    3725                 3730                 3735

Ala Thr  Gly Val Asp Ala Ile  Cys Thr His His Leu  Asn Pro Gln
    3740                 3745                 3750

Ser Pro  Gly Leu Asp Arg Glu  Gln Leu Tyr Trp Gln  Leu Ser Gln
    3755                 3760                 3765

Met Thr  Asn Gly Ile Lys Glu  Leu Gly Pro Tyr Thr  Leu Asp Arg
    3770                 3775                 3780

Asn Ser  Leu Tyr Val Asn Gly  Phe Thr His Arg Ser  Ser Gly Leu
    3785                 3790                 3795

Thr Thr  Ser Thr Pro Trp Thr  Ser Thr Val Asp Leu  Gly Thr Ser
    3800                 3805                 3810

Gly Thr  Pro Ser Pro Val Pro  Ser Pro Thr Thr Ala  Gly Pro Leu
    3815                 3820                 3825

Leu Val  Pro Phe Thr Leu Asn  Phe Thr Ile Thr Asn  Leu Gln Tyr
    3830                 3835                 3840

Glu Glu  Asp Met His Arg Pro  Gly Ser Arg Lys Phe  Asn Ala Thr
    3845                 3850                 3855

Glu Arg  Val Leu Gln Gly Leu  Leu Ser Pro Ile Phe  Lys Asn Ser
    3860                 3865                 3870

Ser Val  Gly Pro Leu Tyr Ser  Gly Cys Arg Leu Thr  Ser Leu Arg
    3875                 3880                 3885

Pro Glu  Lys Asp Gly Ala Ala  Thr Gly Met Asp Ala  Val Cys Leu
    3890                 3895                 3900

Tyr His  Pro Asn Pro Lys Arg  Pro Gly Leu Asp Arg  Glu Gln Leu
    3905                 3910                 3915

Tyr Trp  Glu Leu Ser Gln Leu  Thr His Asn Ile Thr  Glu Leu Gly
    3920                 3925                 3930

Pro Tyr  Ser Leu Asp Arg Asp  Ser Leu Tyr Val Asn  Gly Phe Thr
    3935                 3940                 3945
```

```
His Gln  Ser Ser Met Thr Thr  Thr Arg Thr Pro Asp  Thr Ser Thr
    3950                 3955                 3960

Met His  Leu Ala Thr Ser Arg  Thr Pro Ala Ser Leu  Ser Gly Pro
    3965                 3970                 3975

Thr Thr  Ala Ser Pro Leu Leu  Val Leu Phe Thr Ile  Asn Cys Thr
    3980                 3985                 3990

Ile Thr  Asn Leu Gln Tyr Glu  Glu Asp Met Arg Arg  Thr Gly Ser
    3995                 4000                 4005

Arg Lys  Phe Asn Thr Met Glu  Ser Val Leu Gln Gly  Leu Leu Lys
    4010                 4015                 4020

Pro Leu  Phe Lys Asn Thr Ser  Val Gly Pro Leu Tyr  Ser Gly Cys
    4025                 4030                 4035

Arg Leu  Thr Leu Leu Arg Pro  Lys Lys Asp Gly Ala  Ala Thr Gly
    4040                 4045                 4050

Val Asp  Ala Ile Cys Thr His  Arg Leu Asp Pro Lys  Ser Pro Gly
    4055                 4060                 4065

Leu Asn  Arg Glu Gln Leu Tyr  Trp Glu Leu Ser Lys  Leu Thr Asn
    4070                 4075                 4080

Asp Ile  Glu Glu Leu Gly Pro  Tyr Thr Leu Asp Arg  Asn Ser Leu
    4085                 4090                 4095

Tyr Val  Asn Gly Phe Thr His  Gln Ser Ser Val Ser  Thr Thr Ser
    4100                 4105                 4110

Thr Pro  Gly Thr Ser Thr Val  Asp Leu Arg Thr Ser  Gly Thr Pro
    4115                 4120                 4125

Ser Ser  Leu Ser Ser Pro Thr  Ile Met Xaa Xaa Xaa  Pro Leu Leu
    4130                 4135                 4140

Xaa Pro  Phe Thr Leu Asn Phe  Thr Ile Thr Asn Leu  Xaa Tyr Glu
    4145                 4150                 4155

Glu Xaa  Met Xaa Xaa Pro Gly  Ser Arg Lys Phe Asn  Thr Thr Glu
    4160                 4165                 4170

Arg Val  Leu Gln Gly Leu Leu  Arg Pro Leu Phe Lys  Asn Thr Ser
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4175 4180 4185

Val Ser Ser Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro
4190 4195 4200

Glu Lys Asp Gly Ala Ala Thr Arg Val Asp Ala Ala Cys Thr Tyr
4205 4210 4215

Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr
4220 4225 4230

Trp Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro
4235 4240 4245

Tyr Thr Leu Asp Arg Val Ser Leu Tyr Val Asn Gly Phe Asn Pro
4250 4255 4260

Arg Ser Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val
4265 4270 4275

His Leu Ala Thr Ser Gly Thr Pro Ser Ser Leu Pro Gly His Thr
4280 4285 4290

Xaa Xaa Xaa Pro Leu Leu Xaa Pro Phe Thr Leu Asn Phe Thr Ile
4295 4300 4305

Thr Asn Leu Xaa Tyr Glu Glu Xaa Met Xaa Xaa Pro Gly Ser Arg
4310 4315 4320

Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Lys Pro
4325 4330 4335

Leu Phe Arg Asn Ser Ser Leu Glu Tyr Leu Tyr Ser Gly Cys Arg
4340 4345 4350

Leu Ala Ser Leu Arg Pro Glu Lys Asp Ser Ser Ala Met Ala Val
4355 4360 4365

Asp Ala Ile Cys Thr His Arg Pro Asp Pro Glu Asp Leu Gly Leu
4370 4375 4380

Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Asn Leu Thr Asn Gly
4385 4390 4395

Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr
4400 4405 4410

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Val Asn  Gly Phe Thr His Arg  Ser Ser Phe Leu Thr  Thr Ser Thr
    4415                 4420                 4425

Pro Trp  Thr Ser Thr Val Asp  Leu Gly Thr Ser Gly  Thr Pro Ser
    4430                 4435                 4440

Pro Val  Pro Ser Pro Thr Thr  Ala Gly Pro Leu Leu  Val Pro Phe
    4445                 4450                 4455

Thr Leu  Asn Phe Thr Ile Thr  Asn Leu Gln Tyr Glu  Glu Asp Met
    4460                 4465                 4470

His Arg  Pro Gly Ser Arg Arg  Phe Asn Thr Thr Glu  Arg Val Leu
    4475                 4480                 4485

Gln Gly  Leu Leu Thr Pro Leu  Phe Lys Asn Thr Ser  Val Gly Pro
    4490                 4495                 4500

Leu Tyr  Ser Gly Cys Arg Leu  Thr Leu Leu Arg Pro  Glu Lys Gln
    4505                 4510                 4515

Glu Ala  Ala Thr Gly Val Asp  Thr Ile Cys Thr His  Arg Val Asp
    4520                 4525                 4530

Pro Ile  Gly Pro Gly Leu Asp  Arg Glu Arg Leu Tyr  Trp Glu Leu
    4535                 4540                 4545

Ser Gln  Leu Thr Asn Ser Ile  Thr Glu Leu Gly Pro  Tyr Thr Leu
    4550                 4555                 4560

Asp Arg  Asp Ser Leu Tyr Val  Asn Gly Phe Asn Pro  Trp Ser Ser
    4565                 4570                 4575

Val Pro  Thr Thr Ser Thr Pro  Gly Thr Ser Thr Val  His Leu Ala
    4580                 4585                 4590

Thr Ser  Gly Thr Pro Ser Ser  Leu Pro Gly His Thr  Ala Pro Val
    4595                 4600                 4605

Pro Leu  Leu Ile Pro Phe Thr  Leu Asn Phe Thr Ile  Thr Asp Leu
    4610                 4615                 4620

His Tyr  Glu Glu Asn Met Gln  His Pro Gly Ser Arg  Lys Phe Asn
    4625                 4630                 4635

Thr Thr  Glu Arg Val Leu Gln  Gly Leu Leu Lys Pro  Leu Phe Lys
    4640                 4645                 4650
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Ser Thr  Ser Val Gly Pro Leu  Tyr Ser Gly Cys Arg  Leu Thr Leu
    4655                 4660                 4665

Leu Arg  Pro Glu Lys His Gly  Ala Ala Thr Gly Val  Asp Ala Ile
    4670                 4675                 4680

Cys Thr  Leu Arg Leu Asp Pro  Thr Gly Pro Gly Leu  Asp Arg Glu
    4685                 4690                 4695

Arg Leu  Tyr Trp Glu Leu Ser  Gln Leu Thr Asn Ser  Val Thr Glu
    4700                 4705                 4710

Leu Gly  Pro Tyr Thr Leu Asp  Arg Asp Ser Leu Tyr  Val Asn Gly
    4715                 4720                 4725

Phe Thr  His Arg Ser Ser Val  Pro Thr Thr Ser Ile  Pro Gly Thr
    4730                 4735                 4740

Ser Ala  Val His Leu Glu Thr  Ser Gly Thr Pro Ala  Ser Leu Pro
    4745                 4750                 4755

Gly His  Thr Ala Pro Gly Pro  Leu Leu Val Pro Phe  Thr Leu Asn
    4760                 4765                 4770

Phe Thr  Ile Thr Asn Leu Gln  Tyr Glu Glu Asp Met  Arg His Pro
    4775                 4780                 4785

Gly Ser  Arg Lys Phe Ser Thr  Thr Glu Arg Val Leu  Gln Gly Leu
    4790                 4795                 4800

Leu Lys  Pro Leu Phe Lys Asn  Thr Ser Val Ser Ser  Leu Tyr Ser
    4805                 4810                 4815

Gly Cys  Arg Leu Thr Leu Leu  Arg Pro Glu Lys Asp  Gly Ala Ala
    4820                 4825                 4830

Thr Arg  Val Asp Ala Val Cys  Thr His Arg Pro Asp  Pro Lys Ser
    4835                 4840                 4845

Pro Gly  Leu Asp Arg Glu Arg  Leu Tyr Trp Lys Leu  Ser Gln Leu
    4850                 4855                 4860

Thr His  Gly Ile Thr Glu Leu  Gly Pro Tyr Thr Leu  Asp Arg His
    4865                 4870                 4875

Ser Leu  Tyr Val Asn Gly Phe  Thr His Gln Ser Ser  Met Thr Thr
    4880                 4885                 4890
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Thr Arg  Thr Pro Asp Thr Ser  Thr Met His Leu Ala  Thr Ser Arg
    4895                 4900                 4905

Thr Pro  Ala Ser Leu Ser Gly  Pro Thr Thr Ala Ser  Pro Leu Leu
    4910                 4915                 4920

Val Leu  Phe Thr Ile Asn Phe  Thr Ile Thr Asn Gln  Arg Tyr Glu
    4925                 4930                 4935

Glu Asn  Met His His Pro Gly  Ser Arg Lys Phe Asn  Thr Thr Glu
    4940                 4945                 4950

Arg Val  Leu Gln Gly Leu Leu  Arg Pro Val Phe Lys  Asn Thr Ser
    4955                 4960                 4965

Val Gly  Pro Leu Tyr Ser Gly  Cys Arg Leu Thr Leu  Leu Arg Pro
    4970                 4975                 4980

Lys Lys  Asp Gly Ala Ala Thr  Lys Val Asp Ala Ile  Cys Thr Tyr
    4985                 4990                 4995

Arg Pro  Asp Pro Lys Ser Pro  Gly Leu Asp Arg Glu  Gln Leu Tyr
    5000                 5005                 5010

Trp Glu  Leu Ser Gln Leu Thr  His Ser Ile Thr Glu  Leu Gly Pro
    5015                 5020                 5025

Tyr Thr  Gln Asp Arg Asp Ser  Leu Tyr Val Asn Gly  Phe Thr His
    5030                 5035                 5040

Arg Ser  Ser Val Pro Thr Thr  Ser Ile Pro Gly Thr  Ser Ala Val
    5045                 5050                 5055

His Leu  Glu Thr Ser Gly Thr  Pro Ala Ser Leu Pro  Gly His Thr
    5060                 5065                 5070

Ala Pro  Gly Pro Leu Leu Val  Pro Phe Thr Leu Asn  Phe Thr Ile
    5075                 5080                 5085

Thr Asn  Leu Gln Tyr Glu Glu  Asp Met Arg His Pro  Gly Ser Arg
    5090                 5095                 5100

Lys Phe  Asn Thr Thr Glu Arg  Val Leu Gln Gly Leu  Leu Lys Pro
    5105                 5110                 5115

Leu Phe  Lys Ser Thr Ser Val  Gly Pro Leu Tyr Ser  Gly Cys Arg
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5120 5125 5130

Leu Thr Leu Leu Arg Pro Glu Lys Arg Gly Ala Ala Thr Gly Val
5135 5140 5145

Asp Thr Ile Cys Thr His Arg Leu Asp Pro Leu Asn Pro Gly Leu
5150 5155 5160

Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr Arg Gly
5165 5170 5175

Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp Arg Gly Ser Leu Tyr
5180 5185 5190

Val Asn Gly Phe Thr His Arg Thr Ser Val Pro Thr Thr Ser Thr
5195 5200 5205

Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Phe
5210 5215 5220

Ser Leu Pro Ser Pro Ala Xaa Xaa Xaa Pro Leu Leu Xaa Pro Phe
5225 5230 5235

Thr Leu Asn Phe Thr Ile Thr Asn Leu Xaa Tyr Glu Glu Xaa Met
5240 5245 5250

Xaa Xaa Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu
5255 5260 5265

Gln Thr Leu Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly Leu
5270 5275 5280

Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Ser Glu Lys Asp
5285 5290 5295

Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu Asp
5300 5305 5310

Pro Lys Ser Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp Glu Leu
5315 5320 5325

Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu
5330 5335 5340

Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Trp Ile Pro
5345 5350 5355

Val Pro Thr Ser Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly
5360 5365 5370

Ser Gly Thr Pro Ser Leu Pro Ser Ser Pro Thr Thr Ala Gly Pro
5375 5380 5385

Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Lys
5390 5395 5400

Tyr Glu Glu Asp Met His Cys Pro Gly Ser Arg Lys Phe Asn Thr
5405 5410 5415

Thr Glu Arg Val Leu Gln Ser Leu Leu Gly Pro Met Phe Lys Asn
5420 5425 5430

Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu
5435 5440 5445

Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys
5450 5455 5460

Thr His Arg Leu Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln
5465 5470 5475

Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu
5480 5485 5490

Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe
5495 5500 5505

Thr His Gln Thr Ser Ala Pro Asn Thr Ser Thr Pro Gly Thr Ser
5510 5515 5520

Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Ser Leu Pro Ser
5525 5530 5535

Pro Thr Xaa Xaa Xaa Pro Leu Leu Xaa Pro Phe Thr Leu Asn Phe
5540 5545 5550

Thr Ile Thr Asn Leu Xaa Tyr Glu Glu Xaa Met Xaa Xaa Pro Gly
5555 5560 5565

Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu
5570 5575 5580

Xaa Pro Xaa Phe Lys Xaa Thr Ser Val Gly Xaa Leu Tyr Ser Gly
5585 5590 5595

Cys Arg Leu Thr Leu Leu Arg Xaa Glu Lys Xaa Xaa Ala Ala Thr
5600 5605 5610

Xaa Val Asp Xaa Xaa Cys Xaa Xaa Xaa Xaa Asp Pro Xaa Xaa Pro
5615 5620 5625

Gly Leu Asp Arg Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa Leu Thr
5630 5635 5640

Xaa Xaa Ile Xaa Glu Leu Gly Pro Tyr Xaa Leu Asp Arg Xaa Ser
5645 5650 5655

Leu Tyr Val Asn Gly Phe Thr His Trp Ile Pro Val Pro Thr Ser
5660 5665 5670

Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Ser Gly Thr Pro
5675 5680 5685

Ser Ser Leu Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Val Pro
5690 5695 5700

Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Lys Tyr Glu Glu Asp
5705 5710 5715

Met His Cys Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val
5720 5725 5730

Leu Gln Ser Leu Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly
5735 5740 5745

Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Ser Glu Lys
5750 5755 5760

Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Val
5765 5770 5775

Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp Glu
5780 5785 5790

Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr
5795 5800 5805

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln Thr
5810 5815 5820

Ser Ala Pro Asn Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu
5825 5830 5835

Gly Thr Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Ser Ala
5840 5845 5850

Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn
5855 5860 5865

Leu Gln Tyr Glu Glu Asp Met His His Pro Gly Ser Arg Lys Phe
5870 5875 5880

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe
5885 5890 5895

Lys Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr
5900 5905 5910

Leu Leu Arg Pro Glu Lys Asn Gly Ala Ala Thr Gly Met Asp Ala
5915 5920 5925

Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asp Arg
5930 5935 5940

Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa Leu Thr Xaa Xaa Ile Xaa
5945 5950 5955

Glu Leu Gly Pro Tyr Xaa Leu Asp Arg Xaa Ser Leu Tyr Val Asn
5960 5965 5970

Gly Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Thr Ser Thr Pro Gly
5975 5980 5985

Thr Ser Xaa Val Xaa Leu Xaa Thr Ser Gly Thr Pro Xaa Xaa Xaa
5990 5995 6000

Pro Xaa Xaa Thr Xaa Xaa Xaa Pro Leu Leu Xaa Pro Phe Thr Leu
6005 6010 6015

Asn Phe Thr Ile Thr Asn Leu Xaa Tyr Glu Glu Xaa Met Xaa Xaa
6020 6025 6030

Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly
6035 6040 6045

Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser Leu Glu Tyr Leu Tyr
6050 6055 6060

Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu Lys Asp Ser Ser

6065 6070 6075

Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro Glu
6080 6085 6090

Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Asn
6095 6100 6105

Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp Arg
6110 6115 6120

Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Met Pro
6125 6130 6135

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Val Gly Thr Ser
6140 6145 6150

Gly Thr Pro Ser Ser Ser Pro Ser Pro Thr Thr Ala Gly Pro Leu
6155 6160 6165

Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr
6170 6175 6180

Gly Glu Asp Met Gly His Pro Gly Ser Arg Lys Phe Asn Thr Thr
6185 6190 6195

Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Ile Phe Lys Asn Thr
6200 6205 6210

Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg
6215 6220 6225

Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Ile
6230 6235 6240

His His Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Arg Leu
6245 6250 6255

Tyr Trp Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly
6260 6265 6270

Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr
6275 6280 6285

His Arg Thr Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr
6290 6295 6300

Val Asp Leu Gly Thr Ser Gly Thr Pro Phe Ser Leu Pro Ser Pro
6305 6310 6315

Ala Thr Ala Gly Pro Leu Leu Val Leu Phe Thr Leu Asn Phe Thr
6320 6325 6330

Ile Thr Asn Leu Lys Tyr Glu Glu Asp Met His Arg Pro Gly Ser
6335 6340 6345

Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Thr Leu Leu Gly
6350 6355 6360

Pro Met Phe Lys Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys
6365 6370 6375

Arg Leu Thr Leu Leu Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly
6380 6385 6390

Val Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly
6395 6400 6405

Leu Asp Arg Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa Leu Thr Xaa
6410 6415 6420

Xaa Ile Xaa Glu Leu Gly Pro Tyr Xaa Leu Asp Arg Xaa Ser Leu
6425 6430 6435

Tyr Val Asn Gly Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Thr Ser
6440 6445 6450

Thr Pro Gly Thr Ser Xaa Val Xaa Leu Xaa Thr Ser Gly Thr Pro
6455 6460 6465

Xaa Xaa Xaa Pro Xaa Xaa Thr Xaa Xaa Xaa Pro Leu Leu Xaa Pro
6470 6475 6480

Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Xaa Tyr Glu Glu Xaa
6485 6490 6495

Met Xaa Xaa Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val
6500 6505 6510

Leu Gln Gly Leu Leu Arg Pro Val Phe Lys Asn Thr Ser Val Gly
6515 6520 6525

Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys
6530 6535 6540

Asp Gly Ala Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro
6545 6550 6555

Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu
6560 6565 6570

Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr
6575 6580 6585

Gln Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser
6590 6595 6600

Ser Val Pro Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu
6605 6610 6615

Glu Thr Thr Gly Thr Pro Ser Ser Phe Pro Gly His Thr Glu Pro
6620 6625 6630

Gly Pro Leu Leu Ile Pro Phe Thr Phe Asn Phe Thr Ile Thr Asn
6635 6640 6645

Leu Arg Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe
6650 6655 6660

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Thr Pro Leu Phe
6665 6670 6675

Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr
6680 6685 6690

Leu Leu Arg Pro Glu Lys Gln Glu Ala Ala Thr Gly Val Asp Thr
6695 6700 6705

Ile Cys Thr His Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg
6710 6715 6720

Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr
6725 6730 6735

Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asp
6740 6745 6750

Gly Phe Asn Pro Trp Ser Ser Val Pro Thr Thr Ser Thr Pro Gly
6755 6760 6765

Thr Ser Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Pro Leu
6770 6775 6780

Pro Gly His Thr Ala Pro Val Pro Leu Leu Ile Pro Phe Thr Leu
6785 6790 6795

Asn Phe Thr Ile Thr Asp Leu His Tyr Glu Glu Asn Met Gln His
6800 6805 6810

Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly
6815 6820 6825

Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr
6830 6835 6840

Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys His Gly Ala
6845 6850 6855

Ala Thr Gly Val Asp Ala Ile Cys Thr Leu Arg Leu Asp Pro Thr
6860 6865 6870

Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln
6875 6880 6885

Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg
6890 6895 6900

Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Trp Ser Ser Val Pro
6905 6910 6915

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser
6920 6925 6930

Gly Thr Pro Ser Ser Leu Pro Gly His Thr Thr Ala Gly Pro Leu
6935 6940 6945

Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Lys Tyr
6950 6955 6960

Glu Glu Asp Met His Cys Pro Gly Ser Arg Lys Phe Asn Thr Thr
6965 6970 6975

Glu Arg Val Leu Gln Ser Leu His Gly Pro Met Phe Lys Asn Thr
6980 6985 6990

Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg
6995 7000 7005

Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr

7010 7015 7020

His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Xaa Leu
7025 7030 7035

Tyr Trp Glu Leu Ser Xaa Leu Thr Xaa Xaa Ile Xaa Glu Leu Gly
7040 7045 7050

Pro Tyr Xaa Leu Asp Arg Xaa Ser Leu Tyr Val Asn Gly Phe Xaa
7055 7060 7065

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Thr Ser Thr Pro Gly Thr Ser Xaa
7070 7075 7080

Val Xaa Leu Xaa Thr Ser Gly Thr Pro Xaa Xaa Xaa Pro Xaa Xaa
7085 7090 7095

Thr Xaa Xaa Xaa Pro Leu Leu Xaa Pro Phe Thr Leu Asn Phe Thr
7100 7105 7110

Ile Thr Asn Leu Xaa Tyr Glu Glu Xaa Met Xaa Xaa Pro Gly Ser
7115 7120 7125

Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Xaa
7130 7135 7140

Pro Xaa Phe Lys Xaa Thr Ser Val Gly Xaa Leu Tyr Ser Gly Cys
7145 7150 7155

Arg Leu Thr Leu Leu Arg Xaa Glu Lys Xaa Xaa Ala Ala Thr Xaa
7160 7165 7170

Val Asp Xaa Xaa Cys Xaa Xaa Xaa Xaa Asp Pro Xaa Xaa Pro Gly
7175 7180 7185

Leu Asp Arg Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa Leu Thr Asn
7190 7195 7200

Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu
7205 7210 7215

Tyr Val Asn Gly Phe Thr His Arg Ser Ser Met Pro Thr Thr Ser
7220 7225 7230

Ile Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly Thr Pro
7235 7240 7245

Ala Ser Leu Pro Gly His Thr Ala Pro Gly Pro Leu Leu Val Pro
7250 7255 7260

Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp
7265 7270 7275

Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val
7280 7285 7290

Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly
7295 7300 7305

Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys
7310 7315 7320

Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu
7325 7330 7335

Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Xaa Leu Tyr Trp Glu
7340 7345 7350

Leu Ser Xaa Leu Thr Xaa Xaa Ile Xaa Glu Leu Gly Pro Tyr Xaa
7355 7360 7365

Leu Asp Arg Xaa Ser Leu Tyr Val Asn Gly Phe Xaa Xaa Xaa Xaa
7370 7375 7380

Xaa Xaa Xaa Xaa Thr Ser Thr Pro Gly Thr Ser Xaa Val Xaa Leu
7385 7390 7395

Xaa Thr Ser Gly Thr Pro Xaa Xaa Xaa Pro Xaa Xaa Thr Xaa Xaa
7400 7405 7410

Xaa Pro Leu Leu Xaa Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn
7415 7420 7425

Leu Xaa Tyr Glu Glu Xaa Met Xaa Xaa Pro Gly Ser Arg Lys Phe
7430 7435 7440

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Xaa Pro Xaa Phe
7445 7450 7455

Lys Xaa Thr Ser Val Gly Xaa Leu Tyr Ser Gly Cys Arg Leu Thr
7460 7465 7470

Leu Leu Arg Xaa Glu Lys Xaa Xaa Ala Ala Thr Xaa Val Asp Xaa
7475 7480 7485

Xaa Cys Xaa Xaa Xaa Xaa Asp Pro Xaa Xaa Pro Gly Leu Asp Arg
7490 7495 7500

Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa Leu Thr Xaa Xaa Ile Xaa
7505 7510 7515

Glu Leu Gly Pro Tyr Xaa Leu Asp Arg Xaa Ser Leu Tyr Val Asn
7520 7525 7530

Gly Phe His Pro Arg Ser Ser Val Pro Thr Thr Ser Thr Pro Gly
7535 7540 7545

Thr Ser Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Ser Leu
7550 7555 7560

Pro Gly His Thr Ala Pro Val Pro Leu Leu Ile Pro Phe Thr Leu
7565 7570 7575

Asn Phe Thr Ile Thr Asn Leu His Tyr Glu Glu Asn Met Gln His
7580 7585 7590

Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly
7595 7600 7605

Leu Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly Leu Leu Tyr
7610 7615 7620

Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asn Gly Ala
7625 7630 7635

Ala Thr Gly Met Asp Ala Ile Cys Ser His Arg Leu Asp Pro Lys
7640 7645 7650

Ser Pro Gly Leu Asp Arg Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa
7655 7660 7665

Leu Thr Xaa Xaa Ile Xaa Glu Leu Gly Pro Tyr Xaa Leu Asp Arg
7670 7675 7680

Xaa Ser Leu Tyr Val Asn Gly Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
7685 7690 7695

Xaa Thr Ser Thr Pro Gly Thr Ser Xaa Val Xaa Leu Xaa Thr Ser
7700 7705 7710

Gly Thr Pro Xaa Xaa Xaa Pro Xaa Xaa Thr Xaa Xaa Xaa Pro Leu
7715 7720 7725

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Leu Xaa  Pro Phe Thr Leu Asn  Phe Thr Ile Thr Asn  Leu Xaa Tyr
    7730                 7735                 7740

Glu Glu  Xaa Met Xaa Xaa Pro  Gly Ser Arg Lys Phe  Asn Thr Thr
    7745                 7750                 7755

Glu Arg  Val Leu Gln Gly Leu  Leu Xaa Pro Xaa Phe  Lys Xaa Thr
    7760                 7765                 7770

Ser Val  Gly Xaa Leu Tyr Ser  Gly Cys Arg Leu Thr  Leu Leu Arg
    7775                 7780                 7785

Xaa Glu  Lys Xaa Xaa Ala Ala  Thr Xaa Val Asp Xaa  Xaa Cys Xaa
    7790                 7795                 7800

Xaa Xaa  Xaa Asp Pro Xaa Xaa  Pro Gly Leu Asp Arg  Glu Xaa Leu
    7805                 7810                 7815

Tyr Trp  Glu Leu Ser Xaa Leu  Thr Xaa Xaa Ile Xaa  Glu Leu Gly
    7820                 7825                 7830

Pro Tyr  Xaa Leu Asp Arg Xaa  Ser Leu Tyr Val Asn  Gly Phe Thr
    7835                 7840                 7845

His Gln  Asn Ser Val Pro Thr  Thr Ser Thr Pro Gly  Thr Ser Thr
    7850                 7855                 7860

Val Tyr  Trp Ala Thr Thr Gly  Thr Pro Ser Ser Phe  Pro Gly His
    7865                 7870                 7875

Thr Glu  Pro Gly Pro Leu Leu  Ile Pro Phe Thr Phe  Asn Phe Thr
    7880                 7885                 7890

Ile Thr  Asn Leu His Tyr Glu  Glu Asn Met Gln His  Pro Gly Ser
    7895                 7900                 7905

Arg Lys  Phe Asn Thr Thr Glu  Arg Val Leu Gln Gly  Leu Leu Thr
    7910                 7915                 7920

Pro Leu  Phe Lys Asn Thr Ser  Val Gly Pro Leu Tyr  Ser Gly Cys
    7925                 7930                 7935

Arg Leu  Thr Leu Leu Arg Pro  Glu Lys Gln Glu Ala  Ala Thr Gly
    7940                 7945                 7950

Val Asp  Thr Ile Cys Thr His  Arg Val Asp Pro Ile  Gly Pro Gly
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7955 7960 7965

Leu Asp Arg Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa Leu Thr Xaa
7970 7975 7980

Xaa Ile Xaa Glu Leu Gly Pro Tyr Xaa Leu Asp Arg Xaa Ser Leu
7985 7990 7995

Tyr Val Asn Gly Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Thr Ser
8000 8005 8010

Thr Pro Gly Thr Ser Xaa Val Xaa Leu Xaa Thr Ser Gly Thr Pro
8015 8020 8025

Xaa Xaa Xaa Pro Xaa Xaa Thr Xaa Xaa Xaa Xaa Pro Leu Leu Xaa Pro
8030 8035 8040

Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Xaa Tyr Glu Glu Xaa
8045 8050 8055

Met Xaa Xaa Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val
8060 8065 8070

Leu Gln Gly Leu Leu Xaa Pro Xaa Phe Lys Xaa Thr Ser Val Gly
8075 8080 8085

Xaa Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Xaa Glu Lys
8090 8095 8100

Xaa Xaa Ala Ala Thr Xaa Val Asp Xaa Xaa Cys Xaa Xaa Xaa Xaa
8105 8110 8115

Asp Pro Xaa Xaa Pro Gly Leu Asp Arg Glu Xaa Leu Tyr Trp Glu
8120 8125 8130

Leu Ser Xaa Leu Thr Xaa Xaa Ile Xaa Glu Leu Gly Pro Tyr Xaa
8135 8140 8145

Leu Asp Arg Xaa Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser
8150 8155 8160

Ser Val Pro Thr Thr Ser Ser Pro Gly Thr Ser Thr Val His Leu
8165 8170 8175

Ala Thr Ser Gly Thr Pro Ser Ser Leu Pro Gly His Thr Ala Pro
8180 8185 8190

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Val Pro  Leu Leu Ile Pro Phe  Thr Leu Asn Phe Thr  Ile Thr Asn
    8195                 8200                 8205

Leu His  Tyr Glu Glu Asn Met  Gln His Pro Gly Ser  Arg Lys Phe
    8210                 8215                 8220

Asn Thr  Thr Glu Arg Val Leu  Gln Gly Leu Leu Lys  Pro Leu Phe
    8225                 8230                 8235

Lys Ser  Thr Ser Val Gly Pro  Leu Tyr Ser Gly Cys  Arg Leu Thr
    8240                 8245                 8250

Leu Leu  Arg Pro Glu Lys His  Gly Ala Ala Thr Gly  Val Asp Ala
    8255                 8260                 8265

Ile Cys  Thr Leu Arg Leu Asp  Pro Thr Gly Pro Gly  Leu Asp Arg
    8270                 8275                 8280

Glu Xaa  Leu Tyr Trp Glu Leu  Ser Xaa Leu Thr Xaa  Xaa Ile Xaa
    8285                 8290                 8295

Glu Leu  Gly Pro Tyr Xaa Leu  Asp Arg Xaa Ser Leu  Tyr Val Asn
    8300                 8305                 8310

Gly Phe  Xaa Xaa Xaa Xaa Xaa  Xaa Xaa Xaa Thr Ser  Thr Pro Gly
    8315                 8320                 8325

Thr Ser  Xaa Val Xaa Leu Xaa  Thr Ser Gly Thr Pro  Xaa Xaa Xaa
    8330                 8335                 8340

Pro Xaa  Xaa Thr Xaa Xaa Xaa  Pro Leu Leu Xaa Pro  Phe Thr Leu
    8345                 8350                 8355

Asn Phe  Thr Ile Thr Asn Leu  Xaa Tyr Glu Glu Xaa  Met Xaa Xaa
    8360                 8365                 8370

Pro Gly  Ser Arg Lys Phe Asn  Thr Thr Glu Arg Val  Leu Gln Gly
    8375                 8380                 8385

Leu Leu  Xaa Pro Xaa Phe Lys  Xaa Thr Ser Val Gly  Xaa Leu Tyr
    8390                 8395                 8400

Ser Gly  Cys Arg Leu Thr Leu  Leu Arg Xaa Glu Lys  Xaa Xaa Ala
    8405                 8410                 8415

Ala Thr  Xaa Val Asp Xaa Xaa  Cys Xaa Xaa Xaa Xaa  Asp Pro Xaa
    8420                 8425                 8430
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Xaa Pro Gly Leu Asp Arg Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa
8435 8440 8445

Leu Thr Xaa Xaa Ile Xaa Glu Leu Gly Pro Tyr Xaa Leu Asp Arg
8450 8455 8460

Xaa Ser Leu Tyr Val Asn Gly Phe Thr His Arg Thr Ser Val Pro
8465 8470 8475

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser
8480 8485 8490

Gly Thr Pro Ser Ser Leu Pro Gly His Thr Ala Pro Val Pro Leu
8495 8500 8505

Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr
8510 8515 8520

Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe Asn Thr Thr
8525 8530 8535

Glu Arg Val Leu Gln Gly Leu Leu Ser Pro Ile Phe Lys Asn Ser
8540 8545 8550

Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg
8555 8560 8565

Pro Glu Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu
8570 8575 8580

Tyr His Pro Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu
8585 8590 8595

Tyr Cys Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly
8600 8605 8610

Pro Tyr Ser Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr
8615 8620 8625

His Gln Asn Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr
8630 8635 8640

Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser Phe Pro Gly His
8645 8650 8655

Thr Xaa Xaa Xaa Pro Leu Leu Xaa Pro Phe Thr Leu Asn Phe Thr
8660 8665 8670

Ile Thr Asn Leu Xaa Tyr Glu Glu Xaa Met Xaa Xaa Pro Gly Ser
8675 8680 8685

Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Xaa
8690 8695 8700

Pro Xaa Phe Lys Xaa Thr Ser Val Gly Xaa Leu Tyr Ser Gly Cys
8705 8710 8715

Arg Leu Thr Leu Leu Arg Xaa Glu Lys Xaa Xaa Ala Ala Thr Xaa
8720 8725 8730

Val Asp Xaa Xaa Cys Xaa Xaa Xaa Xaa Asp Pro Xaa Xaa Pro Gly
8735 8740 8745

Leu Asp Arg Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa Leu Thr Xaa
8750 8755 8760

Xaa Ile Xaa Glu Leu Gly Pro Tyr Xaa Leu Asp Arg Xaa Ser Leu
8765 8770 8775

Tyr Val Asn Gly Phe Thr His Trp Ser Ser Gly Leu Thr Thr Ser
8780 8785 8790

Thr Pro Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro
8795 8800 8805

Ser Pro Val Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Val Pro
8810 8815 8820

Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp
8825 8830 8835

Met His Arg Pro Gly Ser Arg Lys Phe Asn Ala Thr Glu Arg Val
8840 8845 8850

Leu Gln Gly Leu Leu Ser Pro Ile Phe Lys Asn Thr Ser Val Gly
8855 8860 8865

Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys
8870 8875 8880

Gln Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Val
8885 8890 8895

Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Xaa Leu Tyr Trp Glu

8900 8905 8910

Leu Ser Xaa Leu Thr Xaa Xaa Ile Xaa Glu Leu Gly Pro Tyr Xaa
8915 8920 8925

Leu Asp Arg Xaa Ser Leu Tyr Val Asn Gly Phe Xaa Xaa Xaa Xaa
8930 8935 8940

Xaa Xaa Xaa Xaa Thr Ser Thr Pro Gly Thr Ser Xaa Val Xaa Leu
8945 8950 8955

Xaa Thr Ser Gly Thr Pro Xaa Xaa Xaa Pro Xaa Xaa Thr Xaa Xaa
8960 8965 8970

Xaa Pro Leu Leu Xaa Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn
8975 8980 8985

Leu Xaa Tyr Glu Glu Xaa Met Xaa Xaa Pro Gly Ser Arg Lys Phe
8990 8995 9000

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Xaa Pro Xaa Phe
9005 9010 9015

Lys Xaa Thr Ser Val Gly Xaa Leu Tyr Ser Gly Cys Arg Leu Thr
9020 9025 9030

Leu Leu Arg Xaa Glu Lys Xaa Xaa Ala Ala Thr Xaa Val Asp Xaa
9035 9040 9045

Xaa Cys Xaa Xaa Xaa Xaa Asp Pro Xaa Xaa Pro Gly Leu Asp Arg
9050 9055 9060

Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa Leu Thr Xaa Xaa Ile Xaa
9065 9070 9075

Glu Leu Gly Pro Tyr Xaa Leu Asp Arg Xaa Ser Leu Tyr Val Asn
9080 9085 9090

Gly Phe Thr His Arg Ser Phe Gly Leu Thr Thr Ser Thr Pro Trp
9095 9100 9105

Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Pro Val
9110 9115 9120

Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu
9125 9130 9135

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Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met His Arg
    9140                9145                9150

Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly
    9155                9160                9165

Leu Leu Thr Pro Leu Phe Arg Asn Thr Ser Val Ser Ser Leu Tyr
    9170                9175                9180

Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala
    9185                9190                9195

Ala Thr Arg Val Asp Ala Val Cys Thr His Arg Pro Asp Pro Lys
    9200                9205                9210

Ser Pro Gly Leu Asp Arg Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa
    9215                9220                9225

Leu Thr Xaa Xaa Ile Xaa Glu Leu Gly Pro Tyr Xaa Leu Asp Arg
    9230                9235                9240

Xaa Ser Leu Tyr Val Asn Gly Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa
    9245                9250                9255

Xaa Thr Ser Thr Pro Gly Thr Ser Xaa Val Xaa Leu Xaa Thr Ser
    9260                9265                9270

Gly Thr Pro Xaa Xaa Xaa Pro Xaa Xaa Thr Xaa Xaa Xaa Pro Leu
    9275                9280                9285

Leu Xaa Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Xaa Tyr
    9290                9295                9300

Glu Glu Xaa Met Xaa Xaa Pro Gly Ser Arg Lys Phe Asn Thr Thr
    9305                9310                9315

Glu Arg Val Leu Gln Gly Leu Leu Xaa Pro Xaa Phe Lys Xaa Thr
    9320                9325                9330

Ser Val Gly Xaa Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg
    9335                9340                9345

Xaa Glu Lys Xaa Xaa Ala Ala Thr Xaa Val Asp Xaa Xaa Cys Xaa
    9350                9355                9360

Xaa Xaa Xaa Asp Pro Xaa Xaa Pro Gly Leu Asp Arg Glu Xaa Leu
    9365                9370                9375
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Tyr Trp Glu Leu Ser Xaa Leu Thr Xaa Xaa Ile Xaa Glu Leu Gly
9380 9385 9390

Pro Tyr Xaa Leu Asp Arg Xaa Ser Leu Tyr Val Asn Gly Phe Thr
9395 9400 9405

His Trp Ile Pro Val Pro Thr Ser Ser Thr Pro Gly Thr Ser Thr
9410 9415 9420

Val Asp Leu Gly Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr
9425 9430 9435

Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile
9440 9445 9450

Thr Asn Leu Gln Tyr Gly Glu Asp Met Gly His Pro Gly Ser Arg
9455 9460 9465

Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Gly Pro
9470 9475 9480

Ile Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg
9485 9490 9495

Leu Thr Ser Leu Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly Val
9500 9505 9510

Asp Ala Ile Cys Ile His His Leu Asp Pro Lys Ser Pro Gly Leu
9515 9520 9525

Asp Arg Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa Leu Thr Xaa Xaa
9530 9535 9540

Ile Xaa Glu Leu Gly Pro Tyr Xaa Leu Asp Arg Xaa Ser Leu Tyr
9545 9550 9555

Val Asn Gly Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Thr Ser Thr
9560 9565 9570

Pro Gly Thr Ser Xaa Val Xaa Leu Xaa Thr Ser Gly Thr Pro Xaa
9575 9580 9585

Xaa Xaa Pro Xaa Xaa Thr Xaa Xaa Xaa Pro Leu Leu Xaa Pro Phe
9590 9595 9600

Thr Leu Asn Phe Thr Ile Thr Asn Leu Xaa Tyr Glu Glu Xaa Met
9605 9610 9615

Xaa Xaa Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu
9620 9625 9630

Gln Gly Leu Leu Xaa Pro Xaa Phe Lys Xaa Thr Ser Val Gly Xaa
9635 9640 9645

Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Xaa Glu Lys Xaa
9650 9655 9660

Xaa Ala Ala Thr Xaa Val Asp Xaa Xaa Cys Xaa Xaa Xaa Xaa Asp
9665 9670 9675

Pro Xaa Xaa Pro Gly Leu Asp Arg Glu Xaa Leu Tyr Trp Glu Leu
9680 9685 9690

Ser Xaa Leu Thr Xaa Xaa Ile Xaa Glu Leu Gly Pro Tyr Xaa Leu
9695 9700 9705

Asp Arg Xaa Ser Leu Tyr Val Asn Gly Phe Thr His Gln Thr Phe
9710 9715 9720

Ala Pro Asn Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly
9725 9730 9735

Thr Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Ser Ala Gly
9740 9745 9750

Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu
9755 9760 9765

Gln Tyr Glu Glu Asp Met His His Pro Gly Ser Arg Lys Phe Asn
9770 9775 9780

Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe Lys
9785 9790 9795

Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu
9800 9805 9810

Leu Arg Pro Glu Lys Asn Gly Ala Ala Thr Arg Val Asp Ala Val
9815 9820 9825

Cys Thr His Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu
9830 9835 9840

Xaa Leu Tyr Trp Glu Leu Ser Xaa Leu Thr Xaa Xaa Ile Xaa Glu

9845 9850 9855

Leu Gly Pro Tyr Xaa Leu Asp Arg Xaa Ser Leu Tyr Val Asn Gly
9860 9865 9870

Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Thr Ser Thr Pro Gly Thr
9875 9880 9885

Ser Xaa Val Xaa Leu Xaa Thr Ser Gly Thr Pro Xaa Xaa Xaa Pro
9890 9895 9900

Xaa Xaa Thr Ala Pro Val Pro Leu Leu Ile Pro Phe Thr Leu Asn
9905 9910 9915

Phe Thr Ile Thr Asn Leu His Tyr Glu Glu Asn Met Gln His Pro
9920 9925 9930

Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
9935 9940 9945

Leu Arg Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser
9950 9955 9960

Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys His Gly Ala Ala
9965 9970 9975

Thr Gly Val Asp Ala Ile Cys Thr Leu Arg Leu Asp Pro Thr Gly
9980 9985 9990

Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu
9995 10000 10005

Thr Asn Ser Val Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp
10010 10015 10020

Ser Leu Tyr Val Asn Gly Phe Thr Gln Arg Ser Ser Val Pro Thr
10025 10030 10035

Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly
10040 10045 10050

Thr Pro Ala Ser Leu Pro Gly His Thr Ala Pro Gly Pro Leu Leu
10055 10060 10065

Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu
10070 10075 10080

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Val Asp   Met Arg His Pro Gly   Ser Arg Lys Phe Asn   Thr Thr Glu
    10085                10090                10095

Arg Val   Leu Gln Gly Leu Leu   Lys Pro Leu Phe Lys   Ser Thr Ser
    10100                10105                10110

Val Gly   Pro Leu Tyr Ser Gly   Cys Arg Leu Thr Leu   Leu Arg Pro
    10115                10120                10125

Glu Lys   Arg Gly Ala Ala Thr   Gly Val Asp Thr Ile   Cys Thr His
    10130                10135                10140

Arg Leu   Asp Pro Leu Asn Pro   Gly Leu Asp Arg Glu   Gln Leu Tyr
    10145                10150                10155

Trp Glu   Leu Ser Lys Leu Thr   Arg Gly Ile Ile Glu   Leu Gly Pro
    10160                10165                10170

Tyr Leu   Leu Asp Arg Gly Ser   Leu Tyr Val Asn Gly   Phe Thr His
    10175                10180                10185

Arg Asn   Phe Val Pro Ile Thr   Ser Thr Pro Gly Thr   Ser Thr Val
    10190                10195                10200

His Leu   Gly Thr Ser Glu Thr   Pro Ser Ser Leu Pro   Arg Pro Ile
    10205                10210                10215

Val Pro   Gly Pro Leu Leu Val   Pro Phe Thr Leu Asn   Phe Thr Ile
    10220                10225                10230

Thr Asn   Leu Gln Tyr Glu Glu   Ala Met Arg His Pro   Gly Ser Arg
    10235                10240                10245

Lys Phe   Asn Thr Thr Glu Arg   Val Leu Gln Gly Leu   Leu Arg Pro
    10250                10255                10260

Leu Phe   Lys Asn Thr Ser Ile   Gly Pro Leu Tyr Ser   Ser Cys Arg
    10265                10270                10275

Leu Thr   Leu Leu Arg Pro Glu   Lys Asp Lys Ala Ala   Thr Arg Val
    10280                10285                10290

Asp Ala   Ile Cys Thr His His   Pro Asp Pro Gln Ser   Pro Gly Leu
    10295                10300                10305

Asn Arg   Glu Gln Leu Tyr Trp   Glu Leu Ser Gln Leu   Thr His Gly
    10310                10315                10320
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Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr
10325 10330 10335

Val Asp Gly Phe Thr His Trp Ser Pro Ile Pro Thr Thr Ser Thr
10340 10345 10350

Pro Gly Thr Ser Ile Val Asn Leu Gly Thr Ser Gly Ile Pro Pro
10355 10360 10365

Ser Leu Pro Glu Thr Thr Xaa Xaa Xaa Pro Leu Leu Xaa Pro Phe
10370 10375 10380

Thr Leu Asn Phe Thr Ile Thr Asn Leu Xaa Tyr Glu Glu Xaa Met
10385 10390 10395

Xaa Xaa Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu
10400 10405 10410

Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro
10415 10420 10425

Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp
10430 10435 10440

Gly Val Ala Thr Arg Val Asp Ala Ile Cys Thr His Arg Pro Asp
10445 10450 10455

Pro Lys Ile Pro Gly Leu Asp Arg Gln Gln Leu Tyr Trp Glu Leu
10460 10465 10470

Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu
10475 10480 10485

Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr Gln Arg Ser Ser
10490 10495 10500

Val Pro Thr Thr Ser Thr Pro Gly Thr Phe Thr Val Gln Pro Glu
10505 10510 10515

Thr Ser Glu Thr Pro Ser Ser Leu Pro Gly Pro Thr Ala Thr Gly
10520 10525 10530

Pro Val Leu Leu Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu
10535 10540 10545

Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe Asn
10550 10555 10560

Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Met Pro Leu Phe Lys
10565 10570 10575

Asn Thr Ser Val Ser Ser Leu Tyr Ser Gly Cys Arg Leu Thr Leu
10580 10585 10590

Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Arg Val Asp Ala Val
10595 10600 10605

Cys Thr His Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu
10610 10615 10620

Arg Leu Tyr Trp Lys Leu Ser Gln Leu Thr His Gly Ile Thr Glu
10625 10630 10635

Leu Gly Pro Tyr Thr Leu Asp Arg His Ser Leu Tyr Val Asn Gly
10640 10645 10650

Phe Thr His Gln Ser Ser Met Thr Thr Thr Arg Thr Pro Asp Thr
10655 10660 10665

Ser Thr Met His Leu Ala Thr Ser Arg Thr Pro Ala Ser Leu Ser
10670 10675 10680

Gly Pro Thr Thr Ala Ser Pro Leu Leu Val Leu Phe Thr Ile Asn
10685 10690 10695

Phe Thr Ile Thr Asn Leu Arg Tyr Glu Glu Asn Met His His Pro
10700 10705 10710

Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
10715 10720 10725

Leu Arg Pro Val Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser
10730 10735 10740

Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala Ala
10745 10750 10755

Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro Asp Pro Lys Ser
10760 10765 10770

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu
10775 10780 10785

Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Gln Asp Arg Asp

10790 10795 10800

Ser Leu Tyr Asn Val Gly Phe Thr Gln Arg Ser Ser Val Pro Thr
10805 10810 10815

Thr Ser Val Pro Gly Thr Pro Thr Val Asp Leu Gly Thr Ser Gly
10820 10825 10830

Thr Pro Val Ser Lys Pro Gly Pro Ser Ala Ala Ser Pro Leu Leu
10835 10840 10845

Val Leu Phe Thr Leu Asn Gly Thr Ile Thr Asn Leu Arg Tyr Glu
10850 10855 10860

Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu
10865 10870 10875

Arg Val Leu Gln Gly Leu Leu Arg Ser Leu Phe Lys Ser Thr Ser
10880 10885 10890

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro
10895 10900 10905

Glu Lys Asp Gly Thr Ala Thr Gly Val Asp Ala Ile Cys Thr His
10910 10915 10920

His Pro Asp Pro Lys Ser Pro Arg Leu Asp Arg Glu Gln Leu Tyr
10925 10930 10935

Trp Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly His
10940 10945 10950

Tyr Ala Leu Asp Asn Asp Ser Leu Phe Val Asn Gly Phe Thr His
10955 10960 10965

Arg Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Pro Thr Val
10970 10975 10980

Tyr Leu Gly Ala Ser Lys Thr Pro Ala Ser Ile Phe Gly Pro Ser
10985 10990 10995

Ala Ala Ser His Leu Leu Ile Leu Phe Thr Leu Asn Phe Thr Ile
11000 11005 11010

Thr Asn Leu Arg Tyr Glu Glu Asn Met Trp Pro Gly Ser Arg Lys
11015 11020 11025

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Phe Asn   Thr Thr Glu Arg Val   Leu Gln Gly Leu Leu   Arg Pro Leu
    11030                11035                11040

Phe Lys   Asn Thr Ser Val Gly   Pro Leu Tyr Ser Gly   Ser Arg Leu
    11045                11050                11055

Thr Leu   Leu Arg Pro Glu Lys   Asp Gly Glu Ala Thr   Gly Val Asp
    11060                11065                11070

Ala Ile   Cys Thr His Arg Pro   Asp Pro Thr Gly Pro   Gly Leu Asp
    11075                11080                11085

Arg Glu   Gln Leu Tyr Leu Glu   Leu Ser Gln Leu Thr   His Ser Ile
    11090                11095                11100

Thr Glu   Leu Gly Pro Tyr Thr   Leu Asp Arg Asp Ser   Leu Tyr Val
    11105                11110                11115

Asn Gly   Phe Thr His Arg Ser   Ser Val Pro Thr Thr   Ser Thr Gly
    11120                11125                11130

Val Val   Ser Glu Glu Pro Phe   Thr Leu Asn Phe Thr   Ile Asn Asn
    11135                11140                11145

Leu Arg   Tyr Met Ala Asp Met   Gly Gln Pro Gly Ser   Leu Lys Phe
    11150                11155                11160

Asn Ile   Thr Asp Asn Val Met   Lys His Leu Leu Ser   Pro Leu Phe
    11165                11170                11175

Gln Arg   Ser Ser Leu Gly Ala   Arg Tyr Thr Gly Cys   Arg Val Ile
    11180                11185                11190

Ala Leu   Arg Ser Val Lys Asn   Gly Ala Glu Thr Arg   Val Asp Leu
    11195                11200                11205

Leu Cys   Thr Tyr Leu Gln Pro   Leu Ser Gly Pro Gly   Leu Pro Ile
    11210                11215                11220

Lys Gln   Val Phe His Glu Leu   Ser Gln Gln Thr His   Gly Ile Thr
    11225                11230                11235

Arg Leu   Gly Pro Tyr Ser Leu   Asp Lys Asp Ser Leu   Tyr Leu Asn
    11240                11245                11250

Gly Tyr   Asn Glu Pro Gly Leu   Asp Glu Pro Pro Thr   Thr Pro Lys
    11255                11260                11265
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Pro Ala   Thr Thr Phe Leu Pro   Pro Leu Ser Glu Ala   Thr Thr Ala
    11270                 11275                 11280

Met Gly   Tyr His Leu Lys Thr   Leu Thr Leu Asn Phe   Thr Ile Ser
    11285                 11290                 11295

Asn Leu   Gln Tyr Ser Pro Asp   Met Gly Lys Gly Ser   Ala Thr Phe
    11300                 11305                 11310

Asn Ser   Thr Glu Gly Val Leu   Gln His Leu Leu Arg   Pro Leu Phe
    11315                 11320                 11325

Gln Lys   Ser Ser Met Gly Pro   Phe Tyr Leu Gly Cys   Gln Leu Ile
    11330                 11335                 11340

Ser Leu   Arg Pro Glu Lys Asp   Gly Ala Ala Thr Gly   Val Asp Thr
    11345                 11350                 11355

Thr Cys   Thr Tyr His Pro Asp   Pro Val Gly Pro Gly   Leu Asp Ile
    11360                 11365                 11370

Gln Gln   Leu Tyr Trp Glu Leu   Ser Gln Leu Thr His   Gly Val Thr
    11375                 11380                 11385

Gln Leu   Gly Phe Tyr Val Leu   Asp Arg Asp Ser Leu   Phe Ile Asn
    11390                 11395                 11400

Gly Tyr   Ala Pro Gln Asn Leu   Ser Ile Arg Gly Glu   Tyr Gln Ile
    11405                 11410                 11415

Asn Phe   His Ile Val Asn Trp   Asn Leu Ser Asn Pro   Asp Pro Thr
    11420                 11425                 11430

Ser Ser   Glu Tyr Ile Thr Leu   Leu Arg Asp Ile Gln   Asp Lys Val
    11435                 11440                 11445

Thr Thr   Leu Tyr Lys Gly Ser   Gln Leu His Asp Thr   Phe Arg Phe
    11450                 11455                 11460

Cys Leu   Val Thr Asn Leu Thr   Met Asp Ser Val Leu   Val Thr Val
    11465                 11470                 11475

Lys Ala   Leu Phe Ser Ser Asn   Leu Asp Pro Ser Leu   Val Glu Gln
    11480                 11485                 11490

Val Phe   Leu Asp Lys Thr Leu   Asn Ala Ser Phe His   Trp Leu Gly
    11495                 11500                 11505
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Ser Thr   Tyr Gln Leu Val Asp   Ile His Val Thr Glu   Met Glu Ser
    11510                 11515                 11520

Ser Val   Tyr Gln Pro Thr Ser   Ser Ser Ser Thr Gln   His Phe Tyr
    11525                 11530                 11535

Leu Asn   Phe Thr Ile Thr Asn   Leu Pro Tyr Ser Gln   Asp Lys Ala
    11540                 11545                 11550

Gln Pro   Gly Thr Thr Asn Tyr   Gln Arg Asn Lys Arg   Asn Ile Glu
    11555                 11560                 11565

Asp Ala   Leu Asn Gln Leu Phe   Arg Asn Ser Ser Ile   Lys Ser Tyr
    11570                 11575                 11580

Phe Ser   Asp Cys Gln Val Ser   Thr Phe Arg Ser Val   Pro Asn Arg
    11585                 11590                 11595

His His   Thr Gly Val Asp Ser   Leu Cys Asn Phe Ser   Pro Leu Ala
    11600                 11605                 11610

Arg Arg   Val Asp Arg Val Ala   Ile Tyr Glu Glu Phe   Leu Arg Met
    11615                 11620                 11625

Thr Arg   Asn Gly Thr Gln Leu   Gln Asn Phe Thr Leu   Asp Arg Ser
    11630                 11635                 11640

Ser Val   Leu Val Asp Gly Tyr   Ser Pro Asn Arg Asn   Glu Pro Leu
    11645                 11650                 11655

Thr Gly   Asn Ser Asp Leu Pro   Phe Trp Ala Val Ile   Leu Ile Gly
    11660                 11665                 11670

Leu Ala   Gly Leu Leu Gly Leu   Ile Thr Cys Leu Ile   Cys Gly Val
    11675                 11680                 11685

Leu Val   Thr Thr Arg Arg Arg   Lys Lys Glu Gly Glu   Tyr Asn Val
    11690                 11695                 11700

Gln Gln   Gln Cys Pro Gly Tyr   Tyr Gln Ser His Leu   Asp Leu Glu
    11705                 11710                 11715

Asp Leu   Gln
    11720
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<210> 163

<211> 156
<212> PRT
<213> Homo sapiens

<400> 163

Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe
20 25 30

Asn Ala Thr Glu Arg Val Leu Gln Gly Leu Leu Ser Pro Ile Phe Lys
35 40 45

Asn Ser Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu
50 55 60

Arg Pro Glu Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu
65 70 75 80

Tyr His Pro Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr
85 90 95

Trp Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr
100 105 110

Ser Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Gln Asn
115 120 125

Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Tyr Trp Ala
130 135 140

Thr Thr Gly Thr Pro Ser Ser Phe Pro Gly His Thr
145 150 155

<210> 164
<211> 42
<212> PRT
<213> Homo sapiens

<400> 164

Ala Thr Val Pro Phe Met Val Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe
20 25 30

Asn Ala Thr Glu Arg Glu Leu Gln Gly Leu
35 40

<210> 165
<211> 42
<212> PRT
<213> Homo sapiens

<400> 165

Thr Ala Val Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Gly Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 166
<211> 42
<212> PRT
<213> Homo sapiens

<400> 166

Val Pro Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Glu Glu Ala Met Arg His Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 167
<211> 42
<212> PRT
<213> Homo sapiens

<400> 167

Ala Pro Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe
20 25 30

Ser Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 168
<211> 42
<212> PRT
<213> Homo sapiens

<400> 168

Ala Pro Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 169
<211> 42
<212> PRT
<213> Homo sapiens

<400> 169

Ala Pro Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Glu Val Asp Met Arg His Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 170
<211> 42
<212> PRT
<213> Homo sapiens

<400> 170

Ser Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 171
<211> 42
<212> PRT
<213> Homo sapiens

<400> 171

Ala Ala Gly Pro Leu Leu Met Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr Gly Ser Arg Lys Phe
20 25 30

Asn Thr Met Glu Ser Val Leu Gln Gly Leu
35 40

<210> 172
<211> 42
<212> PRT
<213> Homo sapiens

<400> 172

Thr Ala Ser Pro Leu Leu Val Leu Phe Thr Ile Asn Cys Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr Gly Ser Arg Lys Phe
20 25 30

Asn Thr Met Glu Ser Val Leu Gln Gly Leu
35 40

<210> 173
<211> 42
<212> PRT
<213> Homo sapiens

<400> 173

Ala Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Gly Glu Asp Met Gly His Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 174
<211> 42
<212> PRT
<213> Homo sapiens

<400> 174

Thr Ala Gly Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Gly Glu Asp Met Gly His Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu

35 40

<210> 175
<211> 42
<212> PRT
<213> Homo sapiens

<400> 175

Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Gly Glu Asp Met Gly His Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 176
<211> 42
<212> PRT
<213> Homo sapiens

<400> 176

Thr Ala Gly Pro Leu Leu Val Leu Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Lys Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Thr Leu
35 40

<210> 177
<211> 42
<212> PRT
<213> Homo sapiens

<400> 177

Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe
20 25 30

Asn Ala Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 178
<211> 42
<212> PRT

<213> Homo sapiens

<400> 178

Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Arg Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 179
<211> 42
<212> PRT
<213> Homo sapiens

<400> 179

Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 180
<211> 42
<212> PRT
<213> Homo sapiens

<400> 180

Ala Pro Val Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 181
<211> 42
<212> PRT
<213> Homo sapiens

<400> 181

Ala Thr Gly Pro Val Leu Leu Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 182
<211> 42
<212> PRT
<213> Homo sapiens

<400> 182

Ala Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His His Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 183
<211> 42
<212> PRT
<213> Homo sapiens

<400> 183

Ser Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His His Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 184
<211> 42
<212> PRT
<213> Homo sapiens

<400> 184

Thr Ala Ser Pro Leu Leu Val Leu Phe Thr Ile Asn Phe Thr Ile Thr
1 5 10 15

Asn Gln Arg Tyr Glu Glu Asn Met His His Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 185
<211> 42
<212> PRT
<213> Homo sapiens

<400> 185

Thr Ala Ser Pro Leu Leu Val Leu Phe Thr Ile Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Arg Tyr Glu Glu Asn Met His His Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 186
<211> 42
<212> PRT
<213> Homo sapiens

<400> 186

Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Phe Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 187
<211> 42
<212> PRT
<213> Homo sapiens

<400> 187

Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Phe Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Arg Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 188
<211> 42

<212> PRT
<213> Homo sapiens

<400> 188

Ala Pro Val Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 189
<211> 42
<212> PRT
<213> Homo sapiens

<400> 189

Ala Pro Val Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asp Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 190
<211> 42
<212> PRT
<213> Homo sapiens

<400> 190

Ala Ala Ser Pro Leu Leu Val Leu Phe Thr Leu Asn Gly Thr Ile Thr
1 5 10 15

Asn Leu Arg Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 191
<211> 42
<212> PRT
<213> Homo sapiens

<400> 191

Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr

1 5 10 15

Asn Leu Lys Tyr Glu Glu Asp Met His Cys Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Ser Leu
35 40

<210> 192
<211> 41
<212> PRT
<213> Homo sapiens

<400> 192

Ala Ala Ser His Leu Leu Ile Leu Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Arg Tyr Glu Glu Asn Met Trp Pro Gly Ser Arg Lys Phe Asn
20 25 30

Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 193
<211> 42
<212> PRT
<213> Homo sapiens

<400> 193

Thr Gly Val Val Ser Glu Glu Pro Phe Thr Leu Asn Phe Thr Ile Asn
1 5 10 15

Asn Leu Arg Tyr Met Ala Asp Met Gly Gln Pro Gly Ser Leu Lys Phe
20 25 30

Asn Ile Thr Asp Asn Val Met Lys His Leu
35 40

<210> 194
<211> 42
<212> PRT
<213> Homo sapiens

<400> 194

Ala Met Gly Tyr His Leu Lys Thr Leu Thr Leu Asn Phe Thr Ile Ser
1 5 10 15

Asn Leu Gln Tyr Ser Pro Asp Met Gly Lys Gly Ser Ala Thr Phe Asn
20 25 30

Ser Thr Glu Gly Val Leu Gln His Leu Leu
35 40

<210> 195
<211> 23
<212> PRT
<213> Homo sapiens

<400> 195

Leu Lys Pro Leu Phe Arg Asn Ser Ser Leu Glu Tyr Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Ala Ser Leu Arg
20

<210> 196
<211> 23
<212> PRT
<213> Homo sapiens

<400> 196

Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Thr Leu Leu Arg
20

<210> 197
<211> 23
<212> PRT
<213> Homo sapiens

<400> 197

Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Thr Leu Leu Arg
20

<210> 198
<211> 23
<212> PRT
<213> Homo sapiens

<400> 198

Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Thr Leu Leu Arg
20

<210> 199
<211> 23
<212> PRT
<213> Homo sapiens

<400> 199

Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Ser
1 5 10 15

Cys Arg Leu Thr Leu Leu Arg
20

<210> 200
<211> 23
<212> PRT
<213> Homo sapiens

<400> 200

Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Thr Ser Leu Arg
20

<210> 201
<211> 23
<212> PRT
<213> Homo sapiens

<400> 201

Leu Gly Pro Ile Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Thr Ser Leu Arg
20

<210> 202
<211> 23
<212> PRT
<213> Homo sapiens

<400> 202

Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Thr Leu Leu Arg
20

<210> 203

<211> 23
<212> PRT
<213> Homo sapiens

<400> 203

Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Thr Leu Leu Arg
20

<210> 204
<211> 23
<212> PRT
<213> Homo sapiens

<400> 204

Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Thr Ser Leu Arg
20

<210> 205
<211> 23
<212> PRT
<213> Homo sapiens

<400> 205

Leu Gly Pro Leu Phe Lys Asn Ser Ser Val Gly Pro Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Ile Ser Leu Arg
20

<210> 206
<211> 23
<212> PRT
<213> Homo sapiens

<400> 206

Leu Gly Pro Leu Phe Lys Asn Ser Ser Val Asp Pro Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Thr Ser Leu Arg
20

<210> 207
<211> 23
<212> PRT
<213> Homo sapiens

<400> 207

Leu Ser Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Thr Ser Leu Arg
20

<210> 208
<211> 23
<212> PRT
<213> Homo sapiens

<400> 208

Leu Ser Pro Ile Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Thr Leu Leu Arg
20

<210> 209
<211> 23
<212> PRT
<213> Homo sapiens

<400> 209

Leu Ser Pro Leu Phe Gln Arg Ser Ser Leu Gly Ala Arg Tyr Thr Gly
1 5 10 15

Cys Arg Val Ile Ala Leu Arg
20

<210> 210
<211> 23
<212> PRT
<213> Homo sapiens

<400> 210

Leu Arg Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Thr Leu Leu Arg
20

<210> 211
<211> 23
<212> PRT
<213> Homo sapiens

<400> 211

Leu Arg Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly
1 5 10 15

Ser Arg Leu Thr Leu Leu Arg
20

<210> 212
<211> 23
<212> PRT
<213> Homo sapiens

<400> 212

Leu Arg Pro Leu Phe Lys Asn Thr Ser Ile Gly Pro Leu Tyr Ser Ser
1 5 10 15

Cys Arg Leu Thr Leu Leu Arg
20

<210> 213
<211> 23
<212> PRT
<213> Homo sapiens

<400> 213

Leu Arg Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Thr Leu Leu Arg
20

<210> 214
<211> 23
<212> PRT
<213> Homo sapiens

<400> 214

Leu Arg Pro Val Phe Lys Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Thr Leu Leu Arg
20

<210> 215
<211> 23
<212> PRT
<213> Homo sapiens

<400> 215

Leu Arg Pro Val Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Thr Leu Leu Arg
20

<210> 216
<211> 23
<212> PRT
<213> Homo sapiens

<400> 216

Leu Arg Ser Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Thr Leu Leu Arg
20

<210> 217
<211> 23
<212> PRT
<213> Homo sapiens

<400> 217

Leu Arg Ser Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Thr Ser Leu Arg
20

<210> 218
<211> 23
<212> PRT
<213> Homo sapiens

<400> 218

Leu Thr Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Thr Leu Leu Arg
20

<210> 219
<211> 23
<212> PRT
<213> Homo sapiens

<400> 219

Leu Thr Pro Leu Phe Arg Asn Thr Ser Val Ser Ser Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Thr Leu Leu Arg
20

<210> 220
<211> 23
<212> PRT
<213> Homo sapiens

<400> 220

Leu Met Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Thr Leu Leu Arg
20

<210> 221
<211> 22
<212> PRT
<213> Homo sapiens

<400> 221

Arg Pro Leu Phe Gln Lys Ser Ser Met Gly Pro Phe Tyr Leu Gly Cys
1 5 10 15

Gln Leu Ile Ser Leu Arg
20

<210> 222
<211> 58
<212> PRT
<213> Homo sapiens

<400> 222

Pro Glu Lys Asp Ser Ser Ala Met Ala Val Asp Ala Ile Cys Thr His
1 5 10 15

Arg Pro Asp Pro Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp
20 25 30

Glu Leu Ser Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr
35 40 45

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly
50 55

<210> 223
<211> 58
<212> PRT
<213> Homo sapiens

<400> 223

Pro Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His

1 5 10 15

Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp
20 25 30

Glu Leu Ser Lys Leu Thr Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr
35 40 45

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly
50 55

<210> 224
<211> 58
<212> PRT
<213> Homo sapiens

<400> 224

Pro Lys Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His
1 5 10 15

Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp
20 25 30

Glu Leu Ser Lys Leu Thr Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr
35 40 45

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly
50 55

<210> 225
<211> 58
<212> PRT
<213> Homo sapiens

<400> 225

Pro Glu Lys Asp Gly Thr Ala Thr Gly Val Asp Ala Ile Cys Thr His
1 5 10 15

His Pro Asp Pro Lys Ser Pro Arg Leu Asp Arg Glu Gln Leu Tyr Trp
20 25 30

Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly His Tyr Ala
35 40 45

Leu Asp Asn Asp Ser Leu Phe Val Asn Gly
50 55

<210> 226
<211> 58

<212> PRT
<213> Homo sapiens

<400> 226

Pro Glu Lys Asp Gly Glu Ala Thr Gly Val Asp Ala Ile Cys Thr His
1 5 10 15

Arg Pro Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Gln Leu Tyr Leu
20 25 30

Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr
35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly
50 55

<210> 227
<211> 58
<212> PRT
<213> Homo sapiens

<400> 227

Pro Glu Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr
1 5 10 15

His Pro Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp
20 25 30

Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser
35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly
50 55

<210> 228
<211> 58
<212> PRT
<213> Homo sapiens

<400> 228

Pro Glu Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr
1 5 10 15

His Pro Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Cys
20 25 30

Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser
35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly
50 55

<210> 229
<211> 58
<212> PRT
<213> Homo sapiens

<400> 229

Pro Glu Lys Asp Gly Ala Ala Thr Arg Val Asp Ala Ala Cys Thr Tyr
1 5 10 15

Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp
20 25 30

Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr
35 40 45

Leu Asp Arg Val Ser Leu Tyr Val Asn Gly
50 55

<210> 230
<211> 58
<212> PRT
<213> Homo sapiens

<400> 230

Pro Lys Lys Asp Gly Ala Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr
1 5 10 15

Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp
20 25 30

Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr
35 40 45

Gln Asp Arg Asp Ser Leu Tyr Val Asn Gly
50 55

<210> 231
<211> 58
<212> PRT
<213> Homo sapiens

<400> 231

Pro Lys Lys Asp Gly Ala Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr
1 5 10 15

Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp
20 25 30

Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr
35 40 45

Gln Asp Arg Asp Ser Leu Tyr Asn Val Gly
50 55

<210> 232
<211> 58
<212> PRT
<213> Homo sapiens

<400> 232

Pro Glu Lys Asp Gly Ala Ala Thr Arg Val Asp Ala Val Cys Thr His
1 5 10 15

Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp
20 25 30

Lys Leu Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro Tyr Thr
35 40 45

Leu Asp Arg His Ser Leu Tyr Val Asn Gly
50 55

<210> 233
<211> 58
<212> PRT
<213> Homo sapiens

<400> 233

Pro Glu Lys Asp Gly Val Ala Thr Arg Val Asp Ala Ile Cys Thr His
1 5 10 15

Arg Pro Asp Pro Lys Ile Pro Gly Leu Asp Arg Gln Gln Leu Tyr Trp
20 25 30

Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr
35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly
50 55

<210> 234
<211> 58
<212> PRT
<213> Homo sapiens

<400> 234

Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Ile His
1 5 10 15

His Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Arg Leu Tyr Trp
20 25 30

Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr
35 40 45

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly
50 55

<210> 235
<211> 58
<212> PRT
<213> Homo sapiens

<400> 235

Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His
1 5 10 15

Arg Leu Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp
20 25 30

Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr
35 40 45

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly
50 55

<210> 236
<211> 58
<212> PRT
<213> Homo sapiens

<400> 236

Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His
1 5 10 15

Arg Leu Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp
20 25 30

Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr
35 40 45

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly
50 55

<210> 237

<211> 58
<212> PRT
<213> Homo sapiens

<400> 237

Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His
1 5 10 15

Arg Val Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp
20 25 30

Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr
35 40 45

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly
50 55

<210> 238
<211> 58
<212> PRT
<213> Homo sapiens

<400> 238

Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His
1 5 10 15

His Leu Asn Pro Gln Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp
20 25 30

Gln Leu Ser Gln Met Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr
35 40 45

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly
50 55

<210> 239
<211> 58
<212> PRT
<213> Homo sapiens

<400> 239

Pro Glu Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His
1 5 10 15

Arg Leu Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp
20 25 30

Glu Leu Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu
35 40 45

Leu Asp Arg Gly Ser Leu Tyr Val Asn Gly
50 55

<210> 240
<211> 58
<212> PRT
<213> Homo sapiens

<400> 240

Pro Glu Lys Asn Gly Ala Ala Thr Gly Met Asp Ala Ile Cys Ser His
1 5 10 15

Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp
20 25 30

Glu Leu Ser Gln Leu Thr His Gly Ile Lys Glu Leu Gly Pro Tyr Thr
35 40 45

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly
50 55

<210> 241
<211> 58
<212> PRT
<213> Homo sapiens

<400> 241

Pro Glu Lys Asn Gly Ala Ala Thr Gly Met Asp Ala Ile Cys Ser His
1 5 10 15

Arg Leu Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp
20 25 30

Glu Leu Ser Gln Leu Thr His Gly Ile Lys Glu Leu Gly Pro Tyr Thr
35 40 45

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly
50 55

<210> 242
<211> 58
<212> PRT
<213> Homo sapiens

<400> 242

Pro Glu Lys His Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr Leu
1 5 10 15

Arg Leu Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp

20 25 30

Glu Leu Ser Gln Leu Thr Asn Ser Val Thr Glu Leu Gly Pro Tyr Thr
35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly
50 55

<210> 243
<211> 58
<212> PRT
<213> Homo sapiens

<400> 243

Pro Glu Lys His Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr Leu
1 5 10 15

Arg Leu Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp
20 25 30

Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr
35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly
50 55

<210> 244
<211> 58
<212> PRT
<213> Homo sapiens

<400> 244

Pro Glu Lys His Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His
1 5 10 15

Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp
20 25 30

Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr
35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly
50 55

<210> 245
<211> 58
<212> PRT
<213> Homo sapiens

<400> 245

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Pro Glu Lys Gln Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His
1               5                   10                  15

Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp
            20                  25                  30

Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr
        35                  40                  45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly
    50                  55
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<210> 246
<211> 58
<212> PRT
<213> Homo sapiens

<400> 246

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Pro Glu Lys Gln Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His
1               5                   10                  15

Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp
            20                  25                  30

Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr
        35                  40                  45

Leu Asp Arg Asp Ser Leu Tyr Val Asp Gly
    50                  55
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<210> 247
<211> 58
<212> PRT
<213> Homo sapiens

<400> 247

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Pro Glu Lys Asp Lys Ala Ala Thr Arg Val Asp Ala Ile Cys Thr His
1               5                   10                  15

His Pro Asp Pro Gln Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp
            20                  25                  30

Glu Leu Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro Tyr Thr
        35                  40                  45

Leu Asp Arg Asp Ser Leu Tyr Val Asp Gly
    50                  55
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<210> 248
<211> 58
<212> PRT
<213> Homo sapiens

<400> 248

Ser Val Lys Asn Gly Ala Glu Thr Arg Val Asp Leu Leu Cys Thr Tyr
1 5 10 15

Leu Gln Pro Leu Ser Gly Pro Gly Leu Pro Ile Lys Gln Val Phe His
20 25 30

Glu Leu Ser Gln Gln Thr His Gly Ile Thr Arg Leu Gly Pro Tyr Ser
35 40 45

Leu Asp Lys Asp Ser Leu Tyr Leu Asn Gly
50 55

<210> 249
<211> 58
<212> PRT
<213> Homo sapiens

<400> 249

Pro Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Thr Thr Cys Thr Tyr
1 5 10 15

His Pro Asp Pro Val Gly Pro Gly Leu Asp Ile Gln Gln Leu Tyr Trp
20 25 30

Glu Leu Ser Gln Leu Thr His Gly Val Thr Gln Leu Gly Phe Tyr Val
35 40 45

Leu Asp Arg Asp Ser Leu Phe Ile Asn Gly
50 55

<210> 250
<211> 12
<212> PRT
<213> Homo sapiens

<400> 250

Phe Thr His Arg Ser Ser Met Pro Thr Thr Ser Thr
1 5 10

<210> 251
<211> 12
<212> PRT
<213> Homo sapiens

<400> 251

Phe Thr His Arg Ser Ser Met Pro Thr Thr Ser Ile
1 5 10

<210> 252
<211> 12
<212> PRT
<213> Homo sapiens

<400> 252

Phe Thr His Arg Thr Ser Val Pro Thr Ser Ser Thr
1 5 10

<210> 253
<211> 12
<212> PRT
<213> Homo sapiens

<400> 253

Phe Thr His Arg Thr Ser Val Pro Thr Thr Ser Thr
1 5 10

<210> 254
<211> 12
<212> PRT
<213> Homo sapiens

<400> 254

Phe Thr His Arg Ser Ser Val Pro Thr Thr Ser Ser
1 5 10

<210> 255
<211> 12
<212> PRT
<213> Homo sapiens

<400> 255

Phe Thr His Arg Ser Ser Val Ser Thr Thr Ser Thr
1 5 10

<210> 256
<211> 12
<212> PRT
<213> Homo sapiens

<400> 256

Phe Thr His Arg Ser Ser Val Ala Pro Thr Ser Thr
1 5 10

<210> 257
<211> 12
<212> PRT

<213> Homo sapiens

<400> 257

Phe Thr His Arg Ser Ser Gly Leu Thr Thr Ser Thr
1 5 10

<210> 258
<211> 12
<212> PRT
<213> Homo sapiens

<400> 258

Phe Thr His Arg Ser Phe Gly Leu Thr Thr Ser Thr
1 5 10

<210> 259
<211> 12
<212> PRT
<213> Homo sapiens

<400> 259

Phe Thr His Arg Ser Ser Phe Leu Thr Thr Ser Thr
1 5 10

<210> 260
<211> 12
<212> PRT
<213> Homo sapiens

<400> 260

Phe Thr His Arg Asn Phe Val Pro Ile Thr Ser Thr
1 5 10

<210> 261
<211> 12
<212> PRT
<213> Homo sapiens

<400> 261

Phe Thr His Arg Ser Ser Val Pro Thr Thr Ser Ile
1 5 10

<210> 262
<211> 12
<212> PRT
<213> Homo sapiens

<400> 262

Phe Thr His Gln Ser Ser Val Ser Thr Thr Ser Thr
1 5 10

<210> 263
<211> 12
<212> PRT
<213> Homo sapiens

<400> 263

Phe Thr His Gln Thr Ser Ala Pro Asn Thr Ser Thr
1 5 10

<210> 264
<211> 12
<212> PRT
<213> Homo sapiens

<400> 264

Phe Thr His Gln Thr Phe Ala Pro Asn Thr Ser Thr
1 5 10

<210> 265
<211> 12
<212> PRT
<213> Homo sapiens

<400> 265

Phe Thr His Gln Asn Ser Val Pro Thr Thr Ser Thr
1 5 10

<210> 266
<211> 12
<212> PRT
<213> Homo sapiens

<400> 266

Phe Thr His Gln Ser Ser Met Thr Thr Thr Arg Thr
1 5 10

<210> 267
<211> 12
<212> PRT
<213> Homo sapiens

<400> 267

Phe Thr His Trp Ile Pro Val Pro Thr Ser Ser Thr
1 5 10

<210> 268
<211> 12
<212> PRT
<213> Homo sapiens

<400> 268

Phe Thr His Trp Ser Pro Ile Pro Thr Thr Ser Thr

1 5 10

<210> 269
<211> 12
<212> PRT
<213> Homo sapiens

<400> 269

Phe Thr His Trp Ser Ser Gly Leu Thr Thr Ser Thr
1 5 10

<210> 270
<211> 12
<212> PRT
<213> Homo sapiens

<400> 270

Phe His Pro Arg Ser Ser Val Pro Thr Thr Ser Thr
1 5 10

<210> 271
<211> 12
<212> PRT
<213> Homo sapiens

<400> 271

Phe Asn Pro Arg Ser Ser Val Pro Thr Thr Ser Thr
1 5 10

<210> 272
<211> 12
<212> PRT
<213> Homo sapiens

<400> 272

Phe Asn Pro Trp Ser Ser Val Pro Thr Thr Ser Thr
1 5 10

<210> 273
<211> 12
<212> PRT
<213> Homo sapiens

<400> 273

Phe Thr Gln Arg Ser Ser Val Pro Thr Thr Ser Ile
1 5 10

<210> 274
<211> 12
<212> PRT
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<400> 274

Phe Thr Gln Arg Ser Ser Val Pro Thr Thr Ser Thr
1 5 10

<210> 275
<211> 12
<212> PRT
<213> Homo sapiens

<400> 275

Phe Thr Gln Arg Ser Ser Val Pro Thr Thr Ser Val
1 5 10

<210> 276
<211> 12
<212> PRT
<213> Homo sapiens

<400> 276

Tyr Asn Glu Pro Gly Leu Asp Glu Pro Pro Thr Thr
1 5 10

<210> 277
<211> 12
<212> PRT
<213> Homo sapiens

<400> 277

Tyr Ala Pro Gln Asn Leu Ser Ile Arg Gly Glu Tyr
1 5 10

<210> 278
<211> 21
<212> PRT
<213> Homo sapiens

<400> 278

Pro Gly Thr Ser Thr Val Asp Val Gly Thr Ser Gly Thr Pro Ser Ser
1 5 10 15

Ser Pro Ser Pro Thr
20

<210> 279
<211> 23
<212> PRT
<213> Homo sapiens

<400> 279

Pro Gly Thr Ser Thr Val Asp Leu Arg Thr Ser Gly Thr Pro Ser Ser
1 5 10 15

Leu Ser Ser Pro Thr Ile Met
20

<210> 280
<211> 21
<212> PRT
<213> Homo sapiens

<400> 280

Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Phe Ser
1 5 10 15

Leu Pro Ser Pro Ala
20

<210> 281
<211> 20
<212> PRT
<213> Homo sapiens

<400> 281

Pro Gly Thr Ser Thr Val Asp Leu Gly Ser Gly Thr Pro Ser Ser Leu
1 5 10 15

Pro Ser Pro Thr
20

<210> 282
<211> 20
<212> PRT
<213> Homo sapiens

<400> 282

Pro Gly Thr Ser Thr Val Asp Leu Gly Ser Gly Thr Pro Ser Leu Pro
1 5 10 15

Ser Ser Pro Thr
20

<210> 283
<211> 21
<212> PRT
<213> Homo sapiens

<400> 283

Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Ser
1 5 10 15

Leu Pro Ser Pro Thr

20

<210> 284
<211> 21
<212> PRT
<213> Homo sapiens

<400> 284

Pro Gly Thr Pro Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Val Ser
1 5 10 15

Lys Pro Gly Pro Ser
20

<210> 285
<211> 21
<212> PRT
<213> Homo sapiens

<400> 285

Pro Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Pro
1 5 10 15

Val Pro Ser Pro Thr
20

<210> 286
<211> 21
<212> PRT
<213> Homo sapiens

<400> 286

Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser
1 5 10 15

Phe Pro Gly His Thr
20

<210> 287
<211> 21
<212> PRT
<213> Homo sapiens

<400> 287

Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Ser
1 5 10 15

Leu Pro Gly His Thr
20

<210> 288
<211> 21
<212> PRT
<213> Homo sapiens

<400> 288

Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Pro
1 5 10 15

Leu Pro Gly His Thr
20

<210> 289
<211> 21
<212> PRT
<213> Homo sapiens

<400> 289

Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg Thr Pro Ala Ser
1 5 10 15

Leu Ser Gly Pro Thr
20

<210> 290
<211> 21
<212> PRT
<213> Homo sapiens

<400> 290

Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly Thr Pro Ala Ser
1 5 10 15

Leu Pro Gly His Thr
20

<210> 291
<211> 21
<212> PRT
<213> Homo sapiens

<400> 291

Pro Gly Thr Ser Ala Val His Leu Glu Thr Thr Gly Thr Pro Ser Ser
1 5 10 15

Phe Pro Gly His Thr
20

<210> 292
<211> 21
<212> PRT

<213> Homo sapiens

<400> 292

Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu Thr Pro Ser Ser
1 5 10 15

Leu Pro Arg Pro Ile
20

<210> 293
<211> 21
<212> PRT
<213> Homo sapiens

<400> 293

Pro Gly Thr Ser Ile Val Asn Leu Gly Thr Ser Gly Ile Pro Pro Ser
1 5 10 15

Leu Pro Glu Thr Thr
20

<210> 294
<211> 21
<212> PRT
<213> Homo sapiens

<400> 294

Pro Gly Thr Phe Thr Val Gln Pro Glu Thr Ser Glu Thr Pro Ser Ser
1 5 10 15

Leu Pro Gly Pro Thr
20

<210> 295
<211> 21
<212> PRT
<213> Homo sapiens

<400> 295

Pro Gly Thr Pro Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Val Ser
1 5 10 15

Lys Pro Gly Pro Ser
20

<210> 296
<211> 21
<212> PRT
<213> Homo sapiens

<400> 296

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Pro Gly Thr Pro Thr Val Tyr Leu Gly Ala Ser Lys Thr Pro Ala Ser
1               5                   10                  15


Ile Phe Gly Pro Ser
            20


<210>  297
<211>  16
<212>  PRT
<213>  Homo sapiens

<400>  297

Pro Lys Pro Ala Thr Thr Phe Leu Pro Pro Leu Ser Glu Ala Thr Thr
1               5                   10                  15


<210>  298
<211>  21
<212>  PRT
<213>  Homo sapiens

<400>  298

Gln Ile Asn Phe His Ile Val Asn Trp Asn Leu Ser Asn Pro Asp Pro
1               5                   10                  15


Thr Ser Ser Glu Tyr
            20


<210>  299
<211>  1794
<212>  PRT
<213>  Homo sapiens

<400>  299

Met Glu His Ile Thr Lys Ile Pro Asn Glu Ala Ala His Arg Gly Thr
1               5                   10                  15


Ile Arg Pro Val Lys Gly Pro Gln Thr Ser Thr Ser Pro Ala Ser Pro
            20                  25                  30


Lys Gly Leu His Thr Gly Gly Thr Lys Arg Met Glu Thr Thr Thr Thr
        35                  40                  45


Ala Leu Lys Thr Thr Thr Thr Ala Leu Lys Thr Thr Ser Arg Ala Thr
    50                  55                  60


Leu Thr Thr Ser Val Tyr Thr Pro Thr Leu Gly Thr Leu Thr Pro Leu
65                  70                  75                  80


Asn Ala Ser Arg Gln Met Ala Ser Thr Ile Leu Thr Glu Met Met Ile
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85 90 95

Thr Thr Pro Tyr Val Phe Pro Asp Val Pro Glu Thr Thr Ser Ser Leu
100 105 110

Ala Thr Ser Leu Gly Ala Glu Thr Ser Thr Ala Leu Pro Arg Thr Thr
115 120 125

Pro Ser Val Leu Asn Arg Glu Ser Glu Thr Thr Ala Ser Leu Val Ser
130 135 140

Arg Ser Gly Ala Glu Arg Ser Pro Val Ile Gln Thr Leu Asp Val Ser
145 150 155 160

Ser Ser Glu Pro Asp Thr Thr Ala Ser Trp Val Ile His Pro Ala Glu
165 170 175

Thr Ile Pro Thr Val Ser Lys Thr Thr Pro Asn Phe Phe His Ser Glu
180 185 190

Leu Asp Thr Val Ser Ser Thr Ala Thr Ser His Gly Ala Asp Val Ser
195 200 205

Ser Ala Ile Pro Thr Asn Ile Ser Pro Ser Glu Leu Asp Ala Leu Thr
210 215 220

Pro Leu Val Thr Ile Ser Gly Thr Asp Thr Ser Thr Thr Phe Pro Thr
225 230 235 240

Leu Thr Lys Ser Pro His Glu Thr Glu Thr Arg Thr Thr Trp Leu Thr
245 250 255

His Pro Ala Glu Thr Ser Ser Thr Ile Pro Arg Thr Ile Pro Asn Phe
260 265 270

Ser His His Glu Ser Asp Ala Thr Pro Ser Ile Ala Thr Ser Pro Gly
275 280 285

Ala Glu Thr Ser Ser Ala Ile Pro Ile Met Thr Val Ser Pro Gly Ala
290 295 300

Glu Asp Leu Val Thr Ser Gln Val Thr Ser Ser Gly Thr Asp Arg Asn
305 310 315 320

Met Thr Ile Pro Thr Leu Thr Leu Ser Pro Gly Glu Pro Lys Thr Ile
325 330 335

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Ala Ser Leu Val Thr His Pro Glu Ala Gln Thr Ser Ser Ala Ile Pro
            340                 345                 350

Thr Ser Thr Ile Ser Pro Ala Val Ser Arg Leu Val Thr Ser Met Val
        355                 360                 365

Thr Ser Leu Ala Ala Lys Thr Ser Thr Thr Asn Arg Ala Leu Thr Asn
    370                 375                 380

Ser Pro Gly Glu Pro Ala Thr Thr Val Ser Leu Val Thr His Pro Ala
385                 390                 395                 400

Gln Thr Ser Pro Thr Val Pro Trp Thr Thr Ser Ile Phe Phe His Ser
                405                 410                 415

Lys Ser Asp Thr Thr Pro Ser Met Thr Thr Ser His Gly Ala Glu Ser
            420                 425                 430

Ser Ser Ala Val Pro Thr Pro Thr Val Ser Thr Glu Val Pro Gly Val
        435                 440                 445

Val Thr Pro Leu Val Thr Ser Ser Arg Ala Val Ile Ser Thr Thr Ile
    450                 455                 460

Pro Ile Leu Thr Leu Ser Pro Gly Glu Pro Glu Thr Thr Pro Ser Met
465                 470                 475                 480

Ala Thr Ser His Gly Glu Glu Ala Ser Ser Ala Ile Pro Thr Pro Thr
                485                 490                 495

Val Ser Pro Gly Val Pro Gly Val Val Thr Ser Leu Val Thr Ser Ser
            500                 505                 510

Arg Ala Val Thr Ser Thr Thr Ile Pro Ile Leu Thr Phe Ser Leu Gly
        515                 520                 525

Glu Pro Glu Thr Thr Pro Ser Met Ala Thr Ser His Gly Thr Glu Ala
    530                 535                 540

Gly Ser Ala Val Pro Thr Val Leu Pro Glu Val Pro Gly Met Val Thr
545                 550                 555                 560

Ser Leu Val Ala Ser Ser Arg Ala Val Thr Ser Thr Thr Leu Pro Thr
                565                 570                 575

Leu Thr Leu Ser Pro Gly Glu Pro Glu Thr Thr Pro Ser Met Ala Thr
            580                 585                 590
```

Ser His Gly Ala Glu Ala Ser Ser Thr Val Pro Thr Val Ser Pro Glu
595 600 605

Val Pro Gly Val Val Thr Ser Leu Val Thr Ser Ser Ser Gly Val Asn
610 615 620

Ser Thr Ser Ile Pro Thr Leu Ile Leu Ser Pro Gly Glu Leu Glu Thr
625 630 635 640

Thr Pro Ser Met Ala Thr Ser His Gly Ala Glu Ala Ser Ser Ala Val
645 650 655

Pro Thr Pro Thr Val Ser Pro Gly Val Ser Gly Val Val Thr Pro Leu
660 665 670

Val Thr Ser Ser Arg Ala Val Thr Ser Thr Thr Ile Pro Ile Leu Thr
675 680 685

Leu Ser Ser Ser Glu Pro Glu Thr Thr Pro Ser Met Ala Thr Ser His
690 695 700

Gly Val Glu Ala Ser Ser Ala Val Leu Thr Val Ser Pro Glu Val Pro
705 710 715 720

Gly Met Val Thr Ser Leu Val Thr Ser Ser Arg Ala Val Thr Ser Thr
725 730 735

Thr Ile Pro Thr Leu Thr Ile Ser Ser Asp Glu Pro Glu Thr Thr Thr
740 745 750

Ser Leu Val Thr His Ser Glu Ala Lys Met Ile Ser Ala Ile Pro Thr
755 760 765

Leu Ala Val Ser Pro Thr Val Gln Gly Leu Val Thr Ser Leu Val Thr
770 775 780

Ser Ser Gly Ser Glu Thr Ser Ala Phe Ser Asn Leu Thr Val Ala Ser
785 790 795 800

Ser Gln Pro Glu Thr Ile Asp Ser Trp Val Ala His Pro Gly Thr Glu
805 810 815

Ala Ser Ser Val Val Pro Thr Leu Thr Val Ser Thr Gly Glu Pro Phe
820 825 830

Thr Asn Ile Ser Leu Val Thr His Pro Ala Glu Ser Ser Ser Thr Leu
835 840 845

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Pro Arg Thr Thr Ser Arg Phe Ser His Ser Glu Leu Asp Thr Met Pro
    850                 855                 860

Ser Thr Val Thr Ser Pro Glu Ala Glu Ser Ser Ser Ala Ile Ser Thr
865                 870                 875                 880

Thr Ile Ser Pro Gly Ile Pro Gly Val Leu Thr Ser Leu Val Thr Ser
                885                 890                 895

Ser Gly Arg Asp Ile Ser Ala Thr Phe Pro Thr Val Pro Glu Ser Pro
            900                 905                 910

His Glu Ser Glu Ala Thr Ala Ser Trp Val Thr His Pro Ala Val Thr
        915                 920                 925

Ser Thr Thr Val Pro Arg Thr Thr Pro Asn Tyr Ser His Ser Glu Pro
    930                 935                 940

Asp Thr Thr Pro Ser Ile Ala Thr Ser Pro Gly Ala Glu Ala Thr Ser
945                 950                 955                 960

Asp Phe Pro Thr Ile Thr Val Ser Pro Asp Val Pro Asp Met Val Thr
                965                 970                 975

Ser Gln Val Thr Ser Ser Gly Thr Asp Thr Ser Ile Thr Ile Pro Thr
            980                 985                 990

Leu Thr Leu Ser Ser Gly Glu Pro  Glu Thr Thr Thr Ser  Phe Ile Thr
        995                 1000                1005

Tyr Ser  Glu Thr His Thr Ser  Ser Ala Ile Pro Thr  Leu Pro Val
    1010                1015                1020

Ser Pro  Gly Ala Ser Lys Met  Leu Thr Ser Leu Val  Ile Ser Ser
    1025                1030                1035

Gly Thr  Asp Ser Thr Thr Thr  Phe Pro Thr Leu Thr  Glu Thr Pro
    1040                1045                1050

Tyr Glu  Pro Glu Thr Thr Ala  Ile Gln Leu Ile His  Pro Ala Glu
    1055                1060                1065

Thr Asn  Thr Met Val Pro Arg  Thr Thr Pro Lys Phe  Ser His Ser
    1070                1075                1080

Lys Ser  Asp Thr Thr Leu Pro  Val Ala Ile Thr Ser  Pro Gly Pro
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1085 1090 1095

Glu Ala Ser Ser Ala Val Ser Thr Thr Thr Ile Ser Pro Asp Met
1100 1105 1110

Ser Asp Leu Val Thr Ser Leu Val Pro Ser Ser Gly Thr Asp Thr
1115 1120 1125

Ser Thr Thr Phe Pro Thr Leu Ser Glu Thr Pro Tyr Glu Pro Glu
1130 1135 1140

Thr Thr Ala Thr Trp Leu Thr His Pro Ala Glu Thr Ser Thr Thr
1145 1150 1155

Val Ser Gly Thr Ile Pro Asn Phe Ser His Arg Gly Ser Asp Thr
1160 1165 1170

Ala Pro Ser Met Val Thr Ser Pro Gly Val Asp Thr Arg Ser Gly
1175 1180 1185

Val Pro Thr Thr Thr Ile Pro Pro Ser Ile Pro Gly Val Val Thr
1190 1195 1200

Ser Gln Val Thr Ser Ser Ala Thr Asp Thr Ser Thr Ala Ile Pro
1205 1210 1215

Thr Leu Thr Pro Ser Pro Gly Glu Pro Glu Thr Thr Ala Ser Ser
1220 1225 1230

Ala Thr His Pro Gly Thr Gln Thr Gly Phe Thr Val Pro Ile Arg
1235 1240 1245

Thr Val Pro Ser Ser Glu Pro Asp Thr Met Ala Ser Trp Val Thr
1250 1255 1260

His Pro Pro Gln Thr Ser Thr Pro Val Ser Arg Thr Thr Ser Ser
1265 1270 1275

Phe Ser His Ser Ser Pro Asp Ala Thr Pro Val Met Ala Thr Ser
1280 1285 1290

Pro Arg Thr Glu Ala Ser Ser Ala Val Leu Thr Thr Ile Ser Pro
1295 1300 1305

Gly Ala Pro Glu Met Val Thr Ser Gln Ile Thr Ser Ser Gly Ala
1310 1315 1320

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Ala Thr  Ser Thr Thr Val Pro  Thr Leu Thr His Ser  Pro Gly Met
    1325                1330                1335

Pro Glu  Thr Thr Ala Leu Leu  Ser Thr His Pro Arg  Thr Glu Thr
    1340                1345                1350

Ser Lys  Thr Phe Pro Ala Ser  Thr Val Phe Pro Gln  Val Ser Glu
    1355                1360                1365

Thr Thr  Ala Ser Leu Thr Ile  Arg Pro Gly Ala Glu  Thr Ser Thr
    1370                1375                1380

Ala Leu  Pro Thr Gln Thr Thr  Ser Ser Leu Phe Thr  Leu Leu Val
    1385                1390                1395

Thr Gly  Thr Ser Arg Val Asp  Leu Ser Pro Thr Ala  Ser Pro Gly
    1400                1405                1410

Val Ser  Ala Lys Thr Ala Pro  Leu Ser Thr His Pro  Gly Thr Glu
    1415                1420                1425

Thr Ser  Thr Met Ile Pro Thr  Ser Thr Leu Ser Leu  Gly Leu Leu
    1430                1435                1440

Glu Thr  Thr Gly Leu Leu Ala  Thr Ser Ser Ser Ala  Glu Thr Ser
    1445                1450                1455

Thr Ser  Thr Leu Thr Leu Thr  Val Ser Pro Ala Val  Ser Gly Leu
    1460                1465                1470

Ser Ser  Ala Ser Ile Thr Thr  Asp Lys Pro Gln Thr  Val Thr Ser
    1475                1480                1485

Trp Asn  Thr Glu Thr Ser Pro  Ser Val Thr Ser Val  Gly Pro Pro
    1490                1495                1500

Glu Phe  Ser Arg Thr Val Thr  Gly Thr Thr Met Thr  Leu Ile Pro
    1505                1510                1515

Ser Glu  Met Pro Thr Pro Pro  Lys Thr Ser His Gly  Glu Gly Val
    1520                1525                1530

Ser Pro  Thr Thr Ile Leu Arg  Thr Thr Met Val Glu  Ala Thr Asn
    1535                1540                1545

Leu Ala  Thr Thr Gly Ser Ser  Pro Thr Val Ala Lys  Thr Thr Thr
    1550                1555                1560
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Thr Phe Asn Thr Leu Ala Gly Ser Leu Phe Thr Pro Leu Thr Thr
1565 1570 1575

Pro Gly Met Ser Thr Leu Ala Ser Glu Ser Val Thr Ser Arg Thr
1580 1585 1590

Ser Tyr Asn His Arg Ser Trp Ile Ser Thr Thr Ser Ser Tyr Asn
1595 1600 1605

Arg Arg Tyr Trp Thr Pro Ala Thr Ser Thr Pro Val Thr Ser Thr
1610 1615 1620

Phe Ser Pro Gly Ile Ser Thr Ser Ser Ile Pro Ser Ser Thr Ala
1625 1630 1635

Ala Thr Val Pro Phe Met Val Pro Phe Thr Leu Asn Phe Thr Ile
1640 1645 1650

Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg
1655 1660 1665

Lys Phe Asn Ala Thr Glu Arg Glu Leu Gln Gly Leu Leu Lys Pro
1670 1675 1680

Leu Phe Arg Asn Ser Ser Leu Glu Tyr Leu Tyr Ser Gly Cys Arg
1685 1690 1695

Leu Ala Ser Leu Arg Pro Glu Lys Asp Ser Ser Ala Met Ala Val
1700 1705 1710

Asp Ala Ile Cys Thr His Arg Pro Asp Pro Glu Asp Leu Gly Leu
1715 1720 1725

Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Asn Leu Thr Asn Gly
1730 1735 1740

Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr
1745 1750 1755

Val Asn Gly Phe Thr His Arg Ser Ser Met Pro Thr Thr Ser Thr
1760 1765 1770

Pro Gly Thr Ser Thr Val Asp Val Gly Thr Ser Gly Thr Pro Ser
1775 1780 1785

Ser Ser Pro Ser Pro Thr
1790

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<212> PRT
<213> Homo sapiens

<400> 300

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Ile Thr Leu Leu Arg Asp Ile Gln Asp Lys Val Thr Thr Leu Tyr Lys
1               5                  10                  15

Gly Ser Gln Leu His Asp Thr Phe Arg Phe Cys Leu Val Thr Asn Leu
            20                  25                  30

Thr Met Asp Ser Val Leu Val Thr Val Lys Ala Leu Phe Ser Ser Asn
        35                  40                  45

Leu Asp Pro Ser Leu Val Glu Gln Val Phe Leu Asp Lys Thr Leu Asn
    50                  55                  60

Ala Ser Phe His Trp Leu Gly Ser Thr Tyr Gln Leu Val Asp Ile His
65                  70                  75                  80

Val Thr Glu Met Glu Ser Ser Val Tyr Gln Pro Thr Ser Ser Ser Ser
                85                  90                  95

Thr Gln His Phe Tyr Leu Asn Phe Thr Ile Thr Asn Leu Pro Tyr Ser
            100                 105                 110

Gln Asp Lys Ala Gln Pro Gly Thr Thr Asn Tyr Gln Arg Asn Lys Arg
        115                 120                 125

Asn Ile Glu Asp Ala Leu Asn Gln Leu Phe Arg Asn Ser Ser Ile Lys
    130                 135                 140

Ser Tyr Phe Ser Asp Cys Gln Val Ser Thr Phe Arg Ser Val Pro Asn
145                 150                 155                 160

Arg His His Thr Gly Val Asp Ser Leu Cys Asn Phe Ser Pro Leu Ala
                165                 170                 175

Arg Arg Val Asp Arg Val Ala Ile Tyr Glu Glu Phe Leu Arg Met Thr
            180                 185                 190

Arg Asn Gly Thr Gln Leu Gln Asn Phe Thr Leu Asp Arg Ser Ser Val
        195                 200                 205

Leu Val Asp Gly Tyr Ser Pro Asn Arg Asn Glu Pro Leu Thr Gly Asn
    210                 215                 220
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Ser Asp Leu Pro Phe Trp Ala Val Ile Leu Ile Gly Leu Ala Gly Leu
225 230 235 240

Leu Gly Leu Ile Thr Cys Leu Ile Cys Gly Val Leu Val Thr Thr Arg
245 250 255

Arg Arg Lys Lys Glu Gly Glu Tyr Asn Val Gln Gln Gln Cys Pro Gly
260 265 270

Tyr Tyr Gln Ser His Leu Asp Leu Glu Asp Leu Gln
275 280

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<220>
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<210> 302
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<400> 302
tagctgctct ctgtccagtc c 21

<210> 303
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<220>
<223> Synthetic primer

<400> 303
ggacaaggtc accacactct ac 22

<210> 304
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<220>
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<400> 304

gcagatcctc caggtctagg tgtg 24

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<220>
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gtctctatgt caatggtttc accc 24

<210> 306
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<212> DNA
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<220>
<223> Synthetic primer

<400> 306
tagctgctct ctgtccagtc c 21

<210> 307
<211> 468
<212> DNA
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gaggaggaca tgcatcgccc tggatctagg aagttcaaca ccacagagag ggtcctgcag 120

ggtctgctta gtcccatatt caagaacacc agtgttggcc ctctgtactc tggctgcaga 180

ctgacctctc tcaggtctga gaaggatgga gcagccactg gagtggatgc catctgcatc 240

catcatcttg accccaaaag ccctggactc aacagagagc ggctgtactg ggagctgagc 300

cgactgacca atggcatcaa agagctgggc ccctacaccc tggacaggaa cagtctctat 360

gtcaatggtt tcacccatcg gacctctgtg cccaccacca gcactcctgg gacctccaca 420

gtggaccttg gaacctcagg gactccattc tccctcccaa gccccgca 468

<210> 308
<211> 156
<212> PRT
<213> Homo sapiens

<400> 308

Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe
20 25 30

```
Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Ser Pro Ile Phe Lys
        35                  40                  45

Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu
    50                  55                  60

Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Ile
65                  70                  75                  80

His His Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Arg Leu Tyr
                85                  90                  95

Trp Glu Leu Ser Arg Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr
            100                 105                 110

Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Thr
        115                 120                 125

Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly
    130                 135                 140

Thr Ser Gly Thr Pro Phe Ser Leu Pro Ser Pro Ala
145                 150                 155


<210>  309
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<212>  PRT
<213>  Homo sapiens

<400>  309

Pro Gly Ser Arg Lys Phe Lys Thr Thr Glu
1               5                   10


<210>  310
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<400>  310
aataa                                                              5
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